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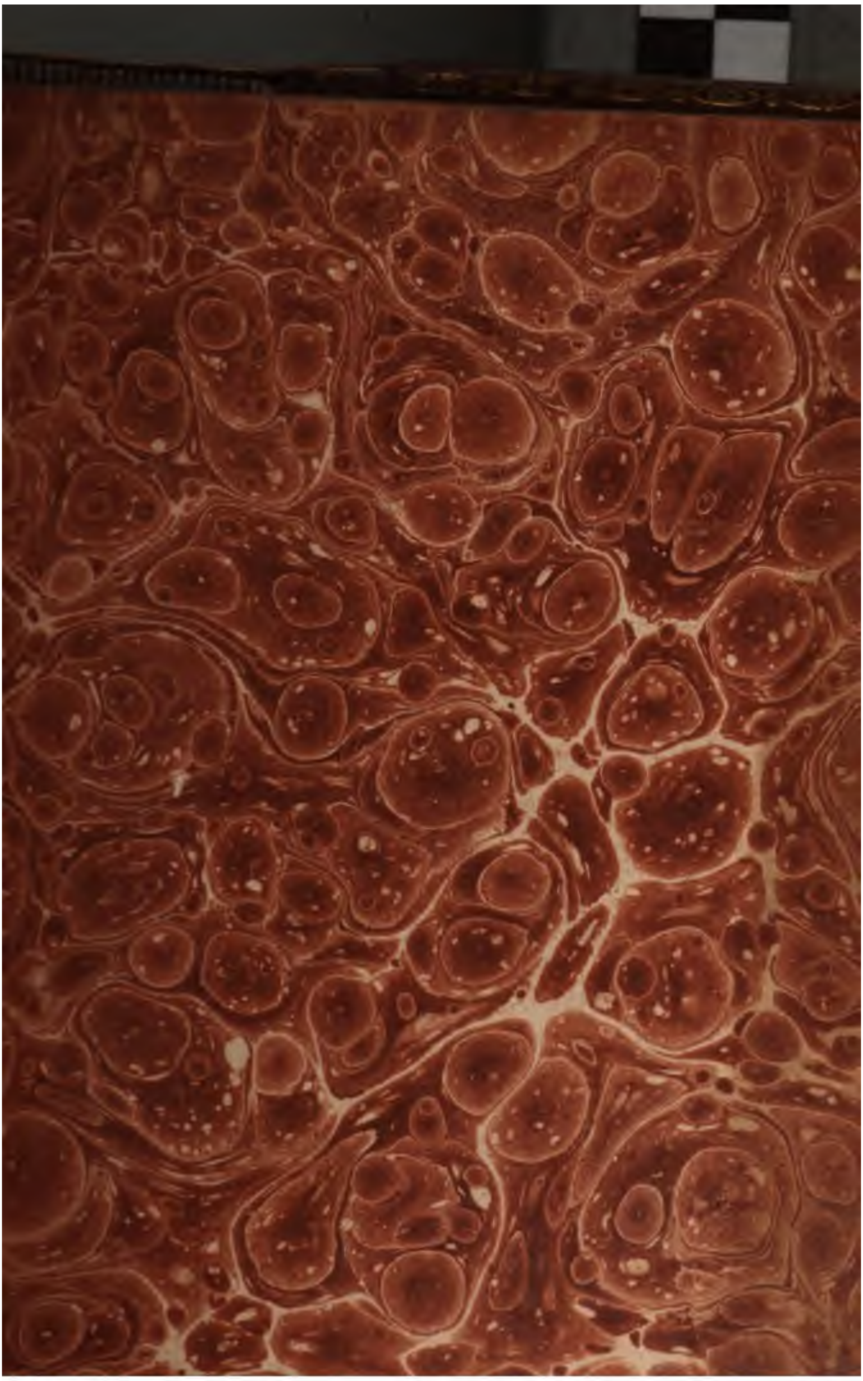

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191315 d. 58

ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS,
AND PLACES OF GROWTH.

TO WHICH WILL BE ADDED,
OCCASIONAL REMARKS.

BY

JAMES EDWARD SMITH, M.D. F.R.S.

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE
ACADEMIES OF STOCKHOLM, UPSAL, TURIN,
LISBON, LUND, BERLIN, PHILADELPHIA, AND
THE NAT. HIST. SOCIETY OF PARIS;
PRESIDENT OF THE LINNEAN SOCIETY.

THE FIGURES BY
JAMES SOWERBY, F.L.S.

——"VIRESQUE ACQUIRIT EUNDO."——*Virg.*

VOL. XXI.

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MDCCCV.

FUCUS ſinuoſus.

Red oak-leaved Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

Spec. Char. Stem round, branched. Leaves oblong, waved, acute, ſinuated or pinnatifid, fringed with minute leaflets.

Syn. Fucus ſinuoſus. *Gooden. and Woodw. in Linn. Tranſ. v.* 3. 111. *Hull.* 316.

F. rubens. *Hudſ.* 573. *Lightf.* 943. *With. v.* 4. 94. *Stackh. Ner. t.* 7.

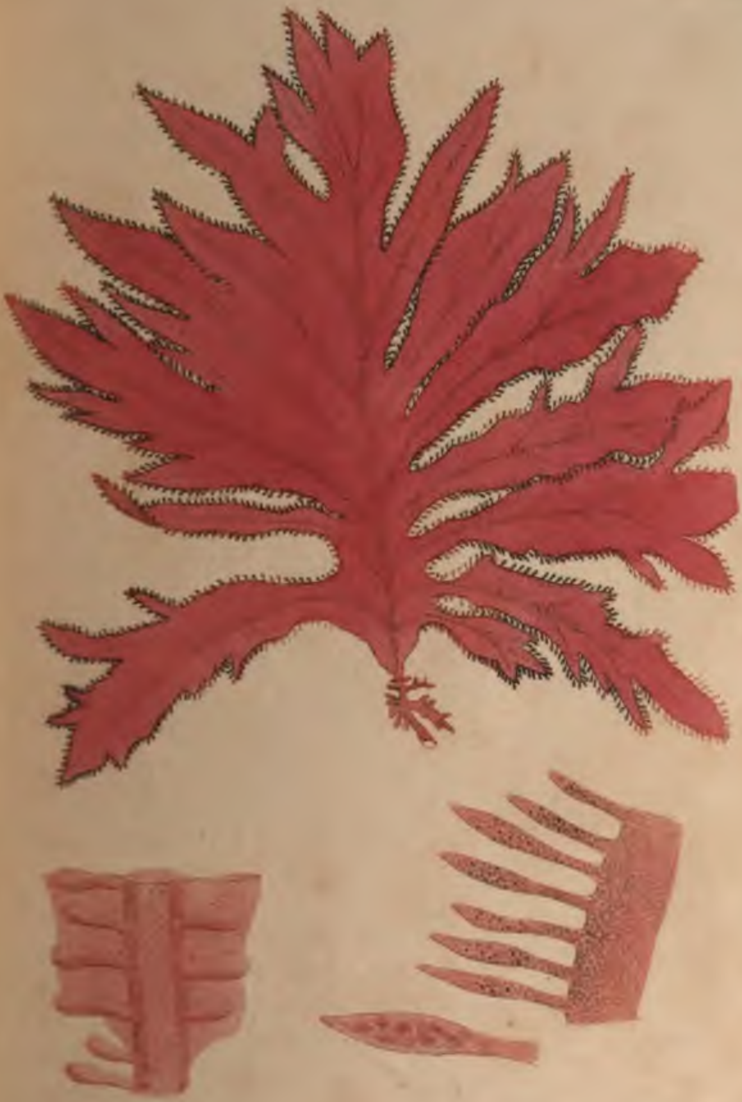
F. roſeus. *Fl. Dan. t.* 652.

F. crenatus. *Gmel. Fuci* 184. *t.* 24. *f.* 1.

F. membranaceus purpureus latifolius pinnatus. *Dill. in Raii Syn.* 47.

A FREQUENT ſpecies on all our ſea-coaſts, generally remarked by the moſt ſuperficial obſervers for its elegance of form and colour. It appears to have eſcaped the notice of Linnæus. Mr. Hudſon miſtook it for his *F. rubens.*

The whole plant is of an uniform red, not ſo vivid as that of a roſe. Under a ſtrong magnifier the whole ſurface, rib and all, appears thickly ſtudded with minute dots, darker than the general membrane: ſee our figure. The ſtem is round, ſlender, branched, generally ſhort, fixed to the rocks or ſtones by a ſmall expanſion of its baſe. Leaves variouſly ſinuated and pinnatifid, membranous, often united at their baſe, for the moſt part oppoſite, furniſhed with a central rib, ending in a point. Their margin is beautifully fringed with minute leaflets, generally pointed, ſometimes oval and blunt, in which ſeveral minute cluſters of ſeeds are lodged. Similar leaflets ſometimes accompany the nerve. The figures of Gmelin and the *Flora Danica* repreſent this Fucus in a more advanced and proliferous ſtate.



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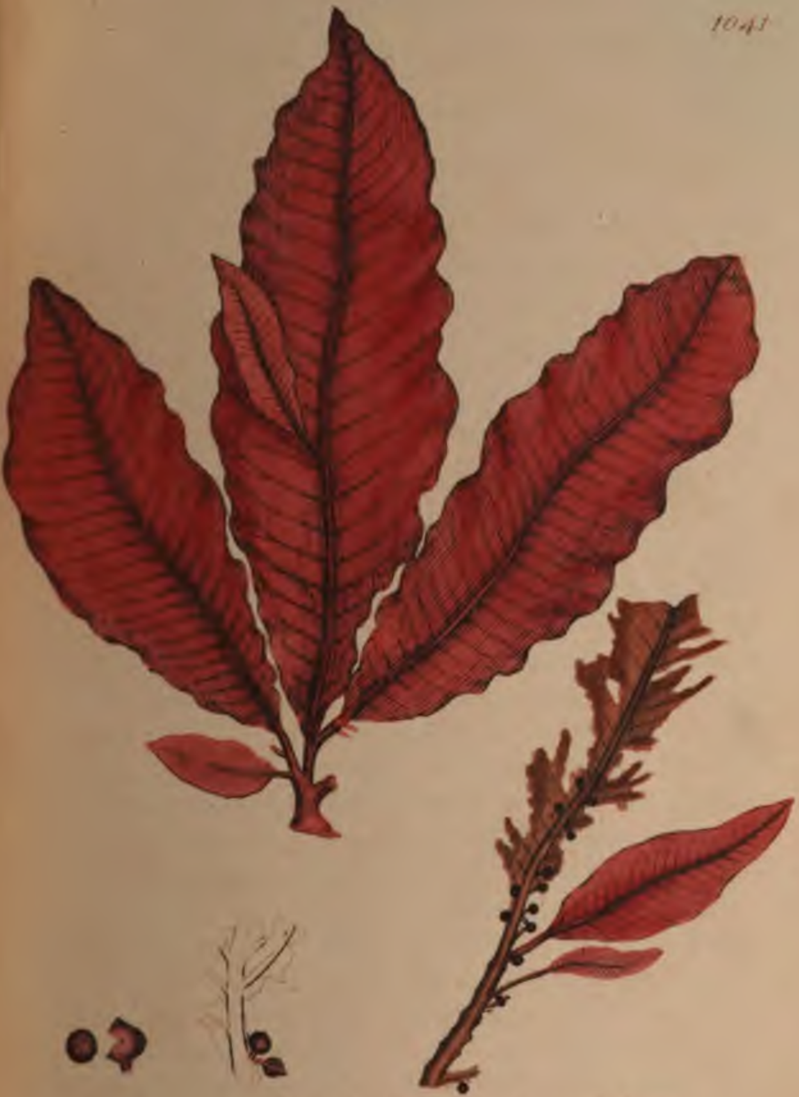


July 1 1802 Published by Jas Sowerby London

FUCUS ſanguineus.

Red dock-leaved Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

Spec. Char. Stem round, branching. Leaves ſimple, elliptical, blunt, waved, entire, with numerous parallel tranſverſe veins.

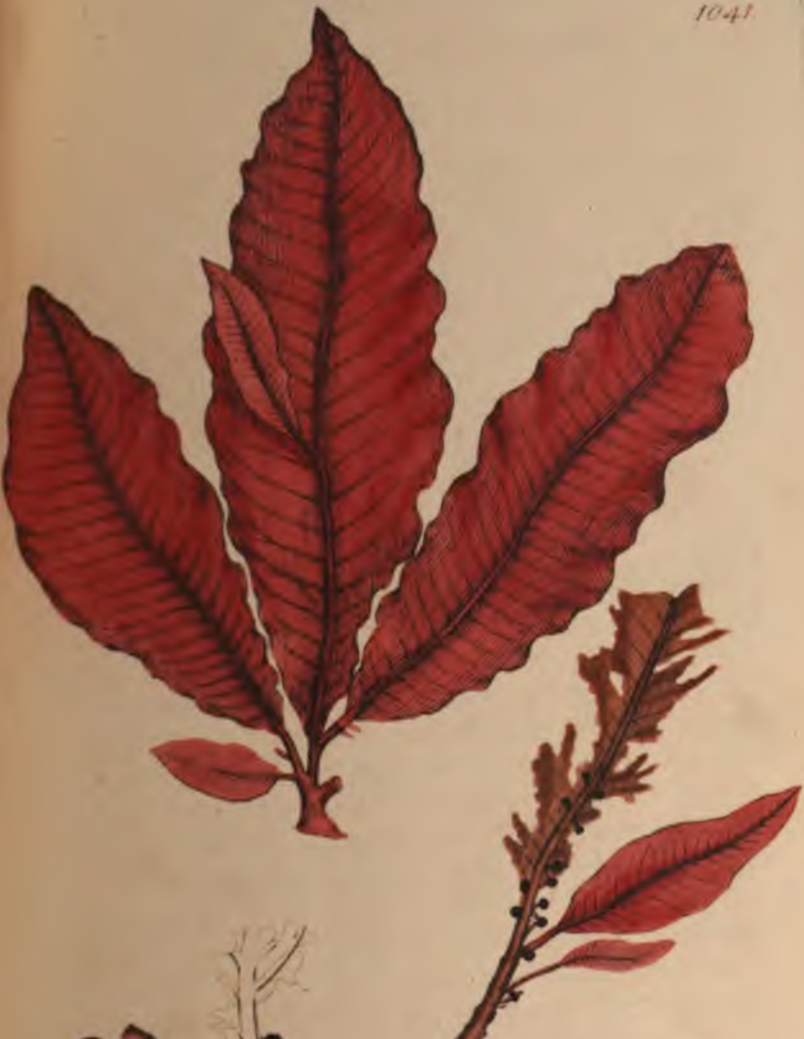
Syn. Fucus ſanguineus. *Linn. Mant.* 136. *Gooden. and Woodw. in Linn. Tranſ.* v. 3. 109. *Hudſ.* 573. *With.* v. 4. 94. *Hull.* 316. *Lightf.* 942. *Gmel. Fuci* 185. *t.* 24. *f.* 2.

F. ſive Alga folio membranaceo purpureo, Lapathi ſanguinei figurâ et magnitudine. *Raii Syn.* 47.

NOT very rare on ſubmarine rocks and ſtones; nor is it unfrequently caſt up on the ſea beach in various parts of England and Scotland. Lightfoot mentions never having ſeen the fruit; but we have found it on the Leith ſhore, and Mr. Dillwyn has favoured us with fine ſpecimens, laden with fructification, from Dover.

The brilliant roſe-colour of this Fucus, and its delicately waved and veined leaves, render it a beautiful and generally attractive object. The ſhort branched ſtem is fixed by a ſwelling to the rocks; the leaves vary in length from 3 to 12 inches; their form is elliptical, obtuſe; their ſubſtance membranous, elegantly waved and plaited; their margin entire. A ſtrong rib continued from the ſtem runs through the leaf, producing at right angles many ſtraight, parallel, lateral ribs or veins. The capſules grow on ſhort ſtalks from the midrib of an old leaf, and are globular, pointed, containing a round maſs of dark-coloured ſeeds.—Ray's compariſon of the leaves to thoſe of *Rumex ſanguineus* is not unapt, however different the colour may be.

1041



July 1. 1802 Publish'd by Jas. Sowerby London

339 E

FUCUS rusciifolius.

Blunt Tongue-bearing Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. Seeds produced in clustered tubercles, which burst at their summits.

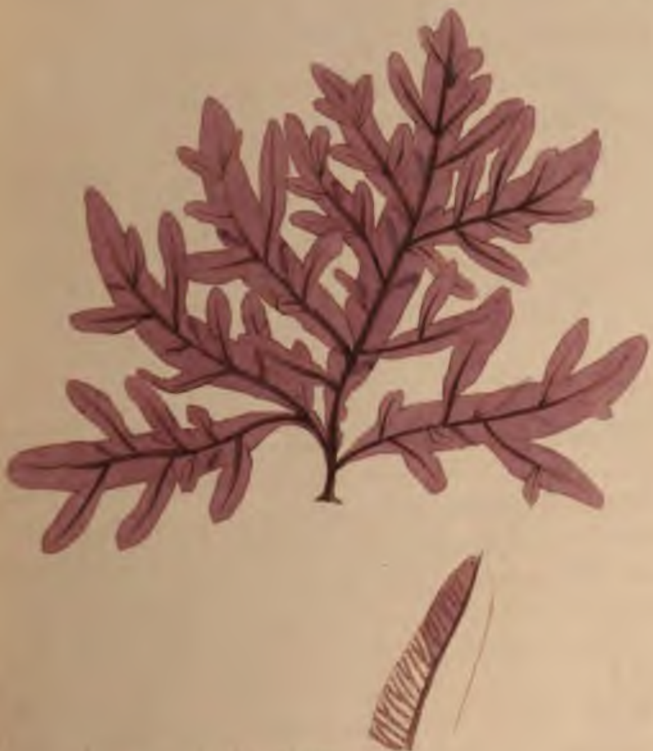
Spec. Char. Stem branched, winged. Leaves oblong-oval, obtuse, flat, entire, proliferous; with pellucid chain-like veins. Tubercles globose, sessile.

Syn. Fucus rusciifolius. *Turner Tr. of Linn. Soc. v.* 6. 127. *t.* 8. *f.* 1. *Syn.* 11.

FOR the knowledge of this elegant Sea-weed, as well as for specimens, we are entirely obliged to Mr. Turner, who first described it in the Linnean Society's Transactions, and afterwards in his excellent Synopsis. At first it was taken for a variety of the species in our next plate, but is accurately and curiously distinguished by the structure of its veins, which, when the leaf is held against the light, appear jointed, or like little chains running parallel to each other. The leaves are also more blunt, and the colour darker than in *F. Hypoglossum*.

Several fronds or stems, 2 or 3 inches high, spring from one callous root. Each branch is winged from top to bottom, forming an oblong, blunt, somewhat elliptical, entire leaf, with a midrib, from which grow several alternate smaller leaves of the same form (like the genus *Ruscus*), and these again often produce from their midribs still smaller leaves. The seeds, according to Mr. Turner, are found in January or February, either constituting round tubercles on the midrib, or arranged in 2 rows parallel to it.—We should rather refer this Fucus and the following to the section of *alati* than to that of *foliis distinctis*.

2395



[illegible] by Jas. Sowerby London.

[1396]

FUCUS Hypoglossum.

Sharp Tongue-bearing Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Stem branched, winged. Leaves linear-lanceolate, acute, flat, entire, proliferous, minutely reticulated. Tubercles globose, sessile.

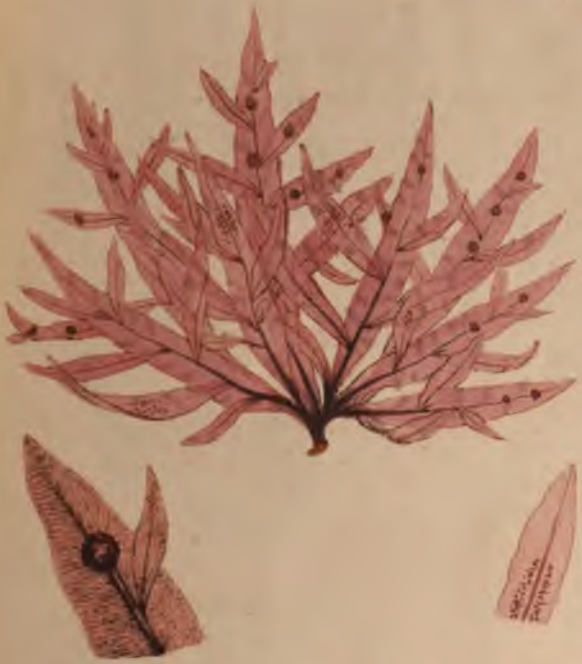
SYN. Fucus Hypoglossum. *Woodward Tr. of Linn. Soc. v.* 2. 30. *t.* 7. and *v.* 3. 113. *Turn. Syn.* 17. *With. v.* 4. 95. *Hull.* 316.

THIS seems to be not so rare as the foregoing, though by no means common. Mr. Crowe found it growing on the rocks at Cromer, from whence probably it is occasionally washed towards the Yarmouth beach. It has also been found on the south and west coasts of Britain. It bears fruit in July and August, not in the winter; which affords Mr. Turner another argument for separating it from his *F. ruscifolius*.

With that species it accords in general habit, size, and fructification; but is of a brighter more beautiful rose-colour, and the leaves are always sharp-pointed. Their structure is uniformly and very minutely reticulated, without those jointed veins which characterize the former.

If we may offer a conjecture respecting the two different positions in which the seeds are found, often on the same frond, we should guess that they may be emitted laterally from the ripe tubercle into the substance of the leaf on each side of the midrib; after which the mere extension of the leaf in growing will account for their being drawn out into two lines. So they must remain till the plant decays, and disperses them in the water.

2396



Dec.r 1. 1812 Publish'd by Ja.s Sowerby London.

5

FUCUS Palmetta.

Dwarf Palm Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

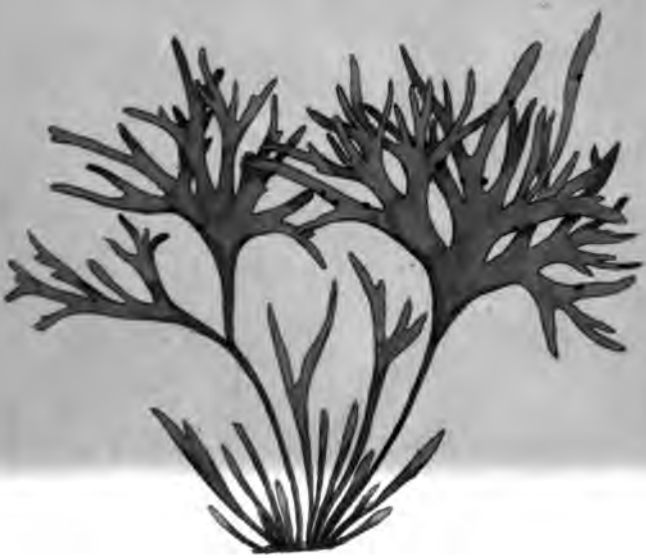
Spec. Char. Stalk round, nearly ſimple. Frond branching into many palmate ſpreading veinleſs ſegments. Tubercles on the extreme linear lobes.

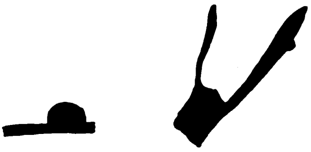
Syn. Fucus Palmetta. *Turn. Syn.* 21. *Stackhouſe Ner. Brit.* 102. *t.* 16.

Our figure of this *Fucus* is taken from the very ſpecimen ſent to Mr. Turner by Mr. Stackhouſe, the only Britiſh botaniſt who has found this ſpecies. It grows paraſitically on the large ſtems of *F. digitatus* on the Corniſh coaſt. Theſe gentlemen have followed Profeſſor Eſper in calling it *F. Palmetta*; though that name was preoccupied by Gmelin: but as his is a doubtful ſpecies, we accede to their deciſion; at the ſame time begging leave to obſerve that a new name would have been preferable.

The root produces ſeveral ſlender, round, moſtly undivided ſtalks, which expand into a ſpreading pale red, palmate, many-fingered leaf, of a thin membranous texture, without veins, and deſtitute of teeth or ſerratures. The extreme ſubdiviſions are linear and very narrow; and on theſe grow the tubercles, ſeſſile, globoſe, of a darker red than the frond, containing many ſeeds, which eſcape by the upper half of each tubercle ſeparating in time from its baſe. By the ſituation of its fructification this plant is, as Mr. Turner juſtly obſerves, ſufficiently diſtinguiſhable from *F. membranifolius*, the only ſpecies with which it could otherwiſe be confounded.

1120





Jan. 1 1803 Published by Jaˢ Sowerby London

FUCUS membranifolius.

Membranous-leaved Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Stalk cylindrical, branched. Leaflets membranous, wedge-shaped, palmate, jagged, obtuse, without ribs. Tubercles lateral, ovate, somewhat stalked.

Syn. Fucus membranifolius. *Gooden. and Woodw. Tr. of Linn. Soc.* v. 3. 120. *t.* 16. *Turn. Syn.* 25. *Hist. Fucor.* v. 2. 6. *t.* 74. *With.* v. 4. 106. *Hull.* 317.

β. F. ceranoides γ. *Huds.* 583.

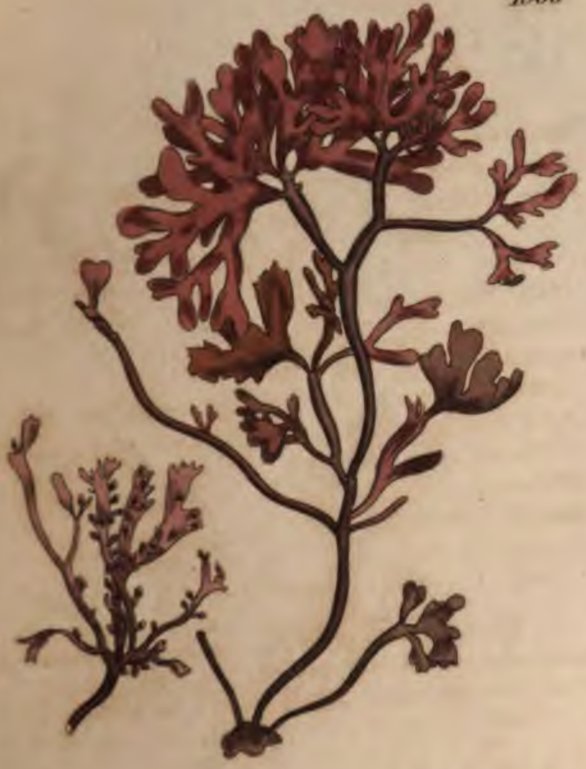
F. parvus, cauliculis teretibus, summitatibus membranaceis dilatatis et laceratis. *Raii Syn.* 44; excluding Morison's syn.

γ. F. fimbriatus. *Huds.* 574. *With.* v. 4. 105; "excluding Gmelin's syn." *Turn.*

NOT rare on the coasts of Britain, bearing fruit in winter. Mr. Turner considers it as perennial.

From a small roundish disk arise several fronds, usually near a span high, of a dull brownish red, greenish in decay, whose stalks are horny, much and irregularly branched, cylindrical, sometimes flattened and dilated upwards. Leaflets numerous, more or less stalked, membranous inclining to coriaceous, without ribs or veins, wedge-shaped but palmate, or in some cases pinnatifid; the summits obtuse and jagged; the margins entire, except in variety γ, in which they are finely fringed. Fructification usually situated on the upper part of the stalks, sometimes on the surface or edges of the leaflets, stalked, though sometimes but slightly, ovate, small, each tubercle containing a globular mass of minute seeds. Mr. Turner has also remarked oblong, dark-red, slightly elevated spots, on both sides of the disk of some leaflets, consisting of dense jointed fibres like those in the tubercles of *F. Griffithsiæ, t.* 1926, which therefore he considers as belonging to the fructification.

1965



[illegible] Published by Jas Sowerby London.

[1966]

FUCUS Brodiæi.

Brodiean Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

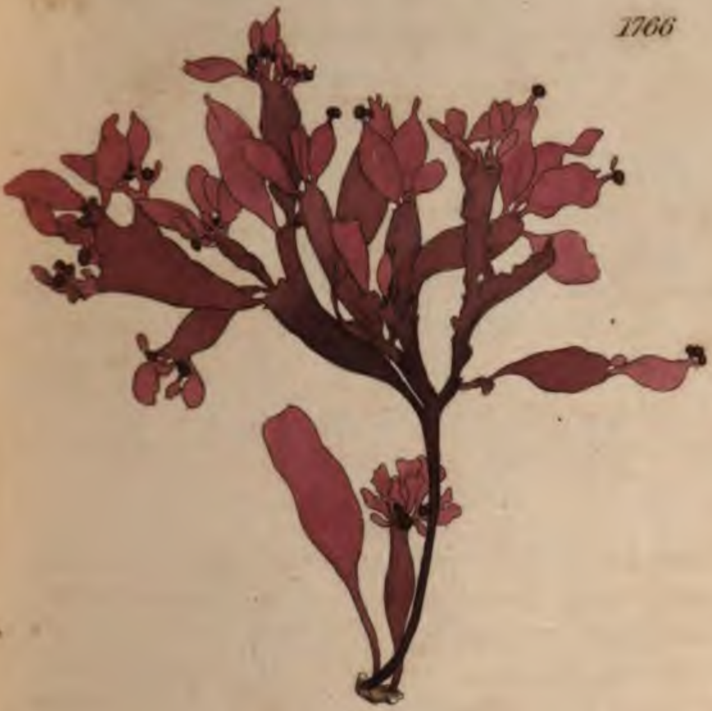
Spec. Char. Stalk cylindrical, branched. Leaflets membranous, oblong, simple or forked, proliferous, without ribs. Tubercles spherical, sessile about the summits of the leaves.

Syn. Fucus Brodiæi. *Turn. Hist. Fucor. v.* 2. 2. *t.* 72.

FOR this rare Fucus we are obliged to the Earl of Seaforth, who gathered it on the Scottish coast at Lossiemouth, from whence the same species had previously been sent to Mr. Turner by our often-mentioned friend and patron Mr. Brodie of Brodie. He is justly commemorated in the specific name, as the discoverer of many new British plants, not to mention his extensive knowledge and zeal as a practical botanist and cultivator, for which reasons I had the pleasure of naming a new genus *Brodiæa* last March in a paper communicated to the Linnæan Society. It is a liliaceous plant, with internal petals like *Tulbaghia*.

Fucus Brodiæi is next akin to the *membranifolius*, from which Mr. Turner first distinguished it. The leaflets are more elongated, especially in their lower part, though somewhat wedge-shaped upward, and are moreover proliferous. The tubercles are very different, being sphærical, sessile or rather innate at the summits of the leaflets, which occasionally throw out new leaflets beyond them. The coating of each tubercle consists of articulated fibres, as in *F. Griffithsiæ*, *t.* 1926, but no separate spots, composed of such fibres, have been observed in this as in *F. membranifolius*, *t.* 1965.

1766



Dec. 1. 1807 Publish'd by Jas. Sowerby London.

FUCUS ovalis.

Oval-leaved Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

SPEC. CHAR. Stem round, branched, rather rigid. Leaves oval, very fleſhy.

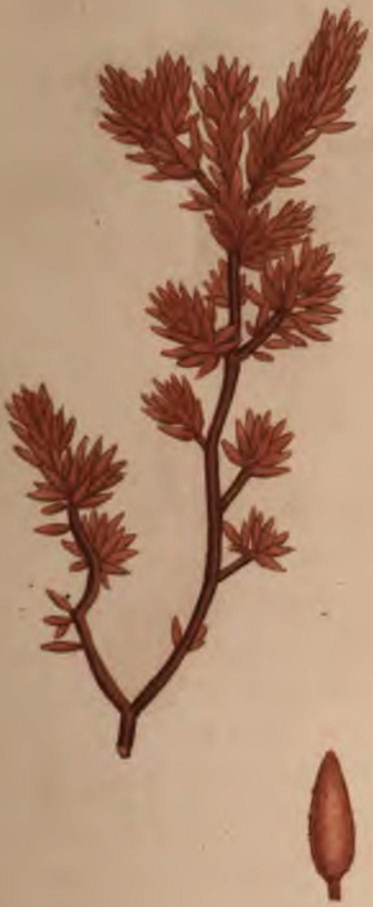
SYN. Fucus ovalis. *Hudſ.* 573. *With. v.* 3. 112. *Hull.* 316. *Gooden. & Woodw. in Linn. Tranſ. v.* 3. 116.

GATHERED laſt ſummer at Weymouth by Mr. D. Turner and Mr. Sowerby. It grows on ſubmarine rocks, and is probably to be found only on the ſouthern coaſt of England, for it is ſuppoſed what Mr. Hudſon had from Scarborough might be the *vermicularis* of Lightfoot.

Fucus ovalis grows to the height of 3 or 4 inches, with a variouſly-branched round ſtem. Leaves irregularly ſcattered, moſt cluſtered in the upper part, ſpreading every way, ſeſſile or ſlightly ſtalked; their form cylindrical, but ſwelling into an oval, more or leſs blunt; their ſubſtance very fleſhy and gelatinous; their colour, like that of the whole plant, a reddiſh pale brown. The fructification is ſcattered in tubercles over the ſurface of the leaf, which project, and are of a darker colour; after the diſperſion of the ſeeds they are ſcarcely prominent at all.

F. botryoides, deſcribed by Wulfen in *Jacq. Coll. v.* 3, 146. *t.* 13. *f.* 1, comes very near this ſpecies, and perhaps is only a variety of it with ſhorter and blunter leaves.

711.



[illegible] J. Sowerby [illegible]

7.

FUCUS tenuissimus.
Slender Tapering Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

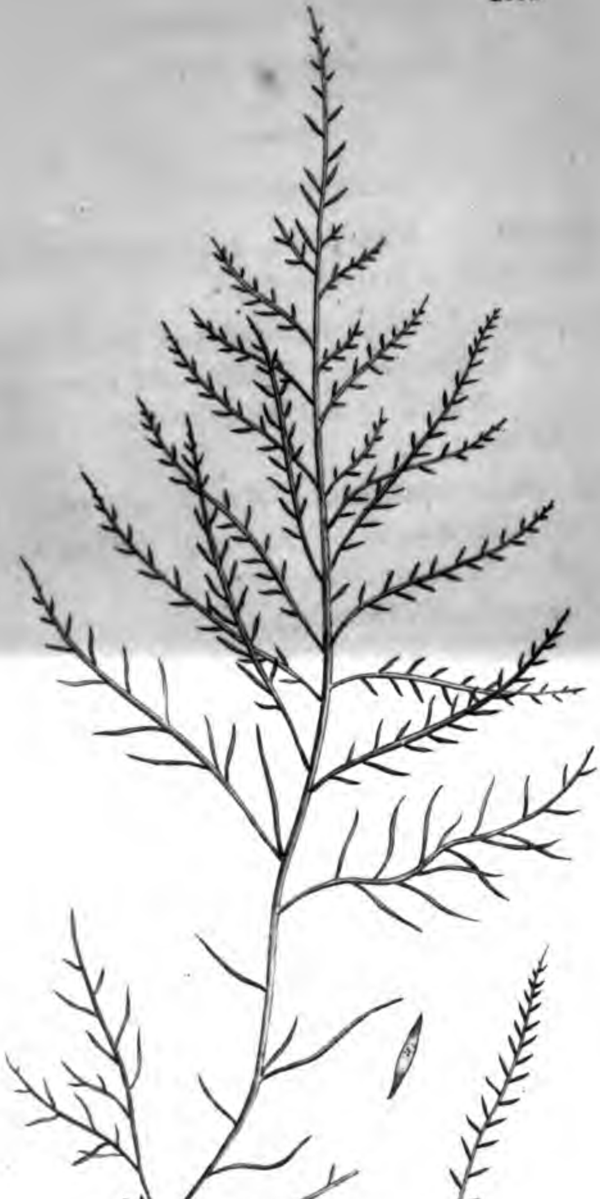
SPEC. CHAR. Frond thread-shaped, much branched, pale flesh-coloured. Branches and leaves tapering at each end. Tubercles ovate-oblong, sessile on the leaves.

SYN. Fucus tenuissimus. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 215. *t.* 19. *Turn. Syn.* 35. *With. v.* 4. 117. *Hull.* 326.
Ulva capillaris. *Huds.* 571.

OUR drawing of this rare *Fucus* was made from Mr. Woodward's specimen under his inspection. It has been found only on the south coast of England, as at Weymouth, Portland, and in Cornwall, and is presumed to be annual, bearing fruit in the summer.

It grows parasitically on other larger *Fuci*, and is throughout of a pale flesh-colour, very tender and delicate. Fronds numerous, from 6 to 10 inches long, much and alternately branched, the branches compound, all tapering at both ends, by which this species is known from *F. dasyphyllus, t.* 847, and *obtusus, t.* 1201. The tubercles grow sessile on the sides of the ultimate branches or leaves, and are of a deeper red colour. In an advanced state Mr. Turner describes the seeds as adhering to the surface of the leaf.

1882



May 1. 1808. Published by Jas. Sowerby London.

10.

[847]

FUCUS daſyphyllus.
Thick-leaved Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

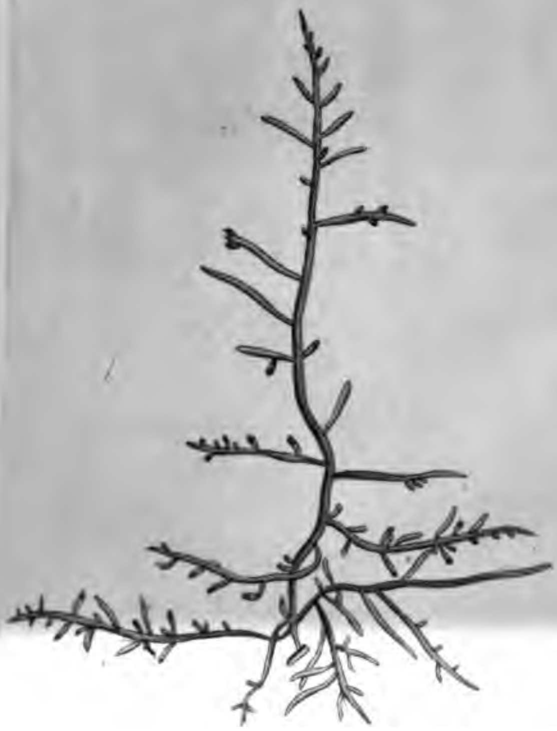
Spec. Char. Stem round, branched. Branches thread-ſhaped, generally ſimple. Leaves ſcattered, cylindrical, obtuſe, tapering at the baſe.

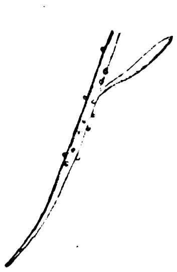
Syn. Fucus daſyphyllus. *Woodw. in. Tr. of Linn. Soc. v.* 2. 239. *t.* 23. *f.* 1—3. *v.* 3. 119. *With. v.* 4. 112. *Hull.* 316.

Mr. LILY WIGG of Yarmouth, ſo eminently ſkilful in detecting, as well as in preſerving, ſpecimens of marine *algæ*, appears to have been the original diſcoverer of this plant on the beach near that town, where it has been ſeveral times found waſhed up by the tide, and from whence Mr. D. Turner communicated our ſpecimen. The plant has been ſeen growing at Cromer by Mr. Woodward, to whom we are obliged for the only original accounts of this ſpecies hitherto publiſhed.

The ſtem is fixed by a ſlender baſe to the rocks or ſtones, and is round, ſucculent, ſcarcely a ſpan high, furniſhed from the very bottom with ſeveral irregularly ſcattered branches of the ſame cylindrical figure, tapering at their inſertion as well as towards their points; the lowermoſt generally ſubdivided; the reſt ſimple. Leaves very irregularly ſcattered, obovate, or rather cylindrical and blunt, with a very taper baſe. The general colour is a pale red, often verging towards a green. The fructification conſiſts of dark-red cluſters of ſeeds, either ſcattered over the branches, as in Mr. Woodward's figure, or lodged toward the extremities of the leaves, as in ours.

847





March 1 1801 Published by Jas Sowerby, London

7.

[1201]

FUCUS obtusus.

Obtuse Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond cartilaginous, thread-shaped, compressed, twice or thrice pinnate; ultimate branches nearly opposite, spreading, obovate, very obtuse, bearing the seeds.

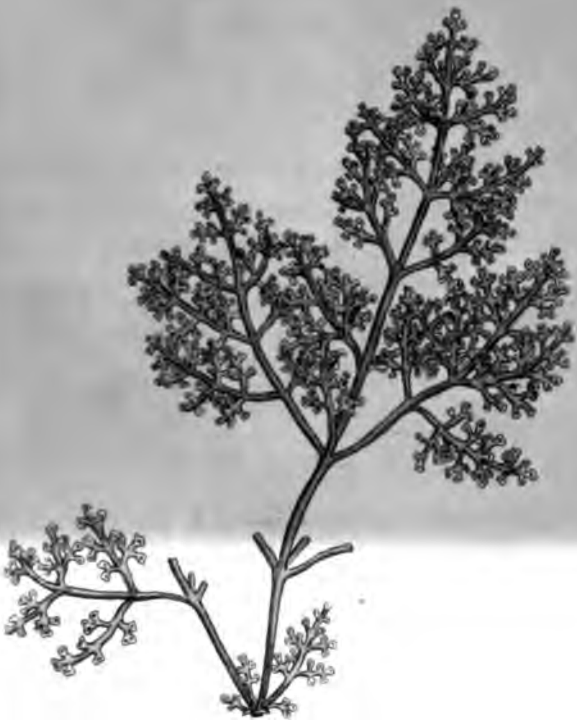
SYN. Fucus obtusus. *Huds.* 586. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 191. *Turn. Syn.* 43. *With. v.* 4. 119. *Hull.* 324. *Velley, t.* 3.

F. spinosus. *Wulf. in Jacq. Coll. v.* 3. 156. *t.* 15. *f.* 1.

WE have received specimens of this pretty and uncommon Fucus from Ireland, by favour of Mr. Templeton of Orange Grove near Belfast. Its delicate light red colour is said to be very fugitive. The plant itself is annual, and not of long duration, perfecting its seeds in summer. It has been observed on the south and west coasts of England only.

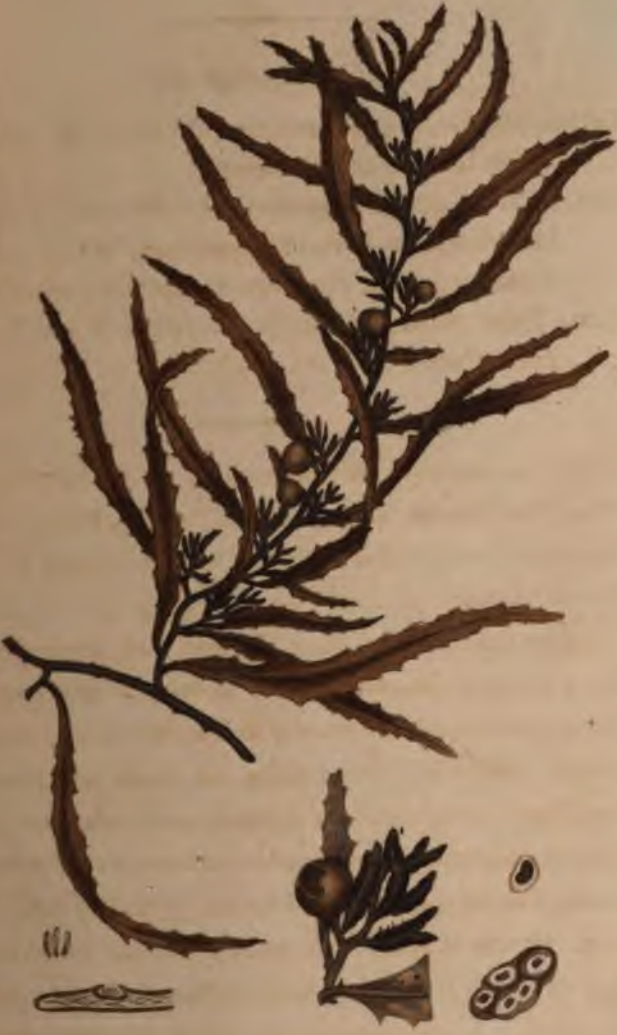
Several stems, various in length and luxuriance, arise from one small callous root, and are at most 6 inches high, being twice or thrice compound, the branches opposite, rarely ternate, their subdivisions pinnate; the ultimate ones generally opposite, obovate or wedge-shaped, very blunt and abrupt, pale and flat at their extremities. The substance of the whole is firm, the stem and branches linear, or rather thread-shaped, slightly flattened. The seeds are in clusters, forming a very dark red spot in the centre of the dilated extremity of each of the ultimate divisions or lobes of the frond.

1160



Augt 1 1803 Publish'd by Jas Sowerby London

2115



Published by J^s Sowerby London.

[2114]

FUCUS natans.

Float Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

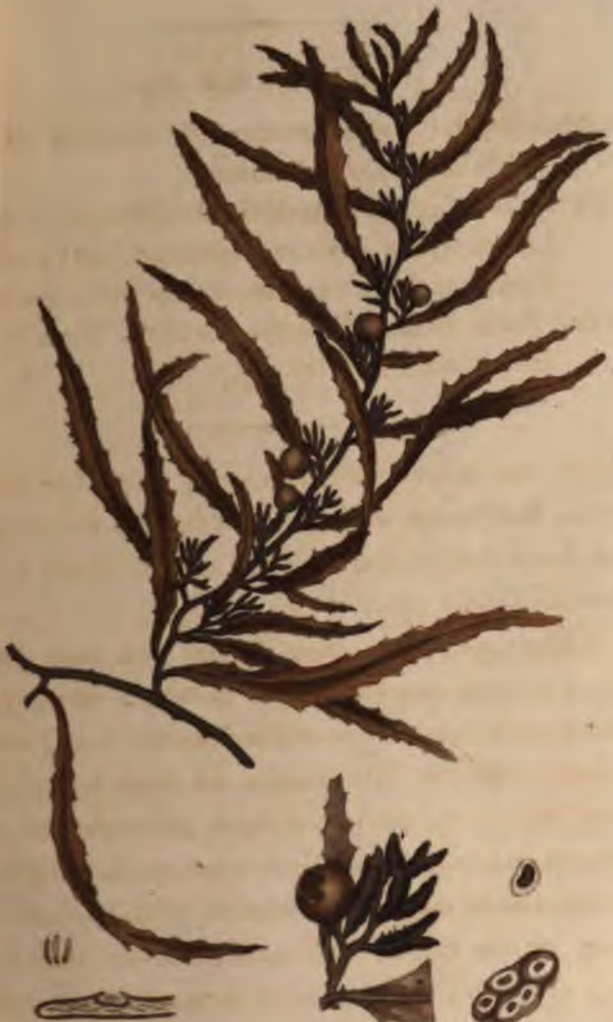
Spec. Char. Stalk threadshaped, alternately bipinnate. Leaves oblong-lanceolate, serrated, with a mid-rib. Vesicles globose, membranous, on compressed stalks.

Syn. Fucus natans. *Linn. Sp. Pl.* 1628. *Turn. Syn.* 48. *Hist. Fucor. v.* 1. 99. *t.* 46.

For this authentic specimen we are indebted to our good friend Mr. Turner, who informs us that Mr. Patrick Neil of Edinburgh has received both this and *bacciferus, t.* 1967, from the Orkney isles.

The present species, first distinguished from that by Mr. Turner, is observed by him to have a more regularly pinnate stalk, generally broader and blunter leaves, with less spinous serratures. The vesicles are much less abundant, their stalks compressed, not round, their substance membranous and smooth, not leathery and rough. The fructification, known only in this, consists of axillary tufts of oblong, cloven, rugged, dark-brown, pod-like tubercles, in each of which several dark seeds are found, deeply imbedded in mucus. At the sides of the leaves are often produced little fibrous tufts, as in other *Fuci*, concerning which no certain opinion has yet been formed.

2114.



Drawn & published by Jas. Sowerby London

13

FUCUS bacciferus.

Berry-bearing Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Stalk thread-shaped, alternately bipinnate. Leaflets linear, serrated, with a mid-rib. Vesicles globose, coriaceous, on round stalks.

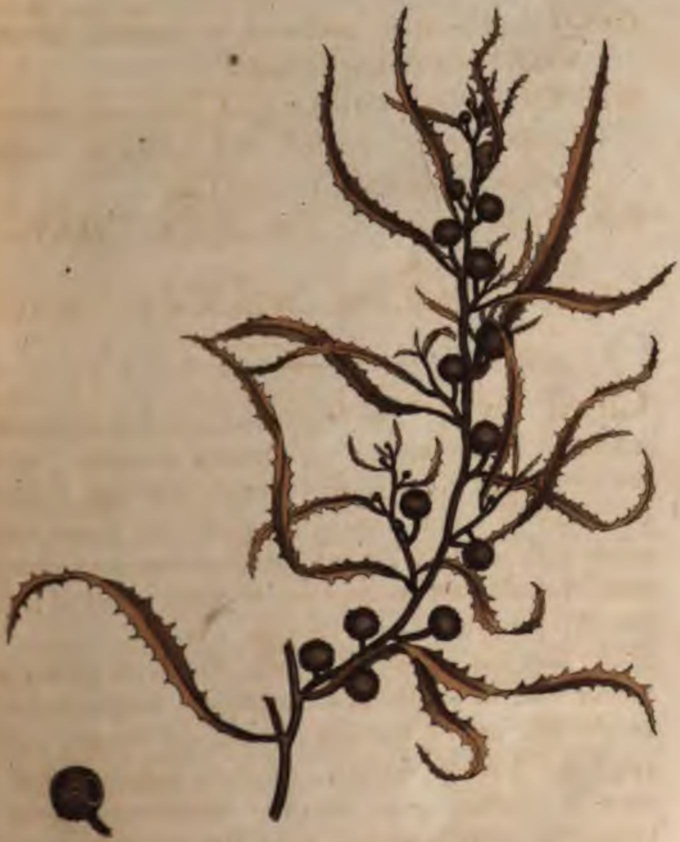
Syn. Fucus bacciferus. *Turn. Syn.* 55. *Hist. Fucor. v.* 1. 103. *t.* 47.

F. natans. *Huds.* 572. *With. v.* 4. 86. *Hull.* 316.

COMMUNICATED by Mr. Turner, who first distinguished it from *F. natans*, with which Linnæus and other botanists had confounded it. Both are extremely abundant, floating in the ocean in various parts of the globe, and thence washed occasionally upon our shores; but the present is so much the most frequent, that we have not been able as yet to procure the other for publication at the same time.

The root has not been observed. Frond, as we find it, a foot or more in length, dark olive brown, doubly pinnate in an alternate order; the stalks round and slender, zigzag, toughish. Leaflets alternate, on short stalks, an inch or more in length, linear, narrow, membranous inclining to coriaceous, strongly serrated, paler than the stalk, and each furnished with a mid-rib. Vesicles numerous, scattered, on round stalks a line or two long, of the size and shape of grains of black pepper, roughish, coriaceous, dark brown, hollow and smooth within. No fructification has been observed.——Both the *Fuci* abovementioned are comprehended by voyagers under the appellation of Gulph-weed.

1967



Jan. 1. 1809. Publish'd by Jas. Sowerby London.

FUCUS filiformis.

Forked Fucus.

CRYPTOGAMIA *Algæ.*

Gen. Char. *Seeds produced in* [illegible] *which burst at their summits.*

Spec. Char. Frond compressed, alternately branched. *Air-bladders of many cells, compressed,* [illegible] *Fructification in lanceolate* [illegible] *with clusters of seeds.*

Syn. Fucus filiformis. *Linn. Sp. Pl.* 1632. *Huds.* [illegible] *With.* v. 4. 98. [illegible] *Nereis Brit.* [illegible] *Goodenough and Woodward Linn. Tr.* v. 3. [illegible]

F. angustifolius, foliolis longis filiquosis [illegible] *Raii Syn.* 48.

ON rocks and stones in the sea, [illegible] as the beach.

Root an expanded tubercle. Whole plant [illegible] when brown. Stem compressed, [illegible] freely branched, a little [illegible]

14.

FUCUS ſiliquoſus.

Podded Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

Spec. Char. Frond compreſſed, alternately branched. Air-bladders of many cells, compreſſed, beaked. Fructification in lanceolate ſolid proceſſes, ſtudded with cluſters of ſeeds.

Syn. Fucus ſiliquoſus. *Linn. Sp. Pl.* 1629. *Hudſ.* 574. *With. V.* 4. 88. *Stackhouſe Nereis Brit. t.* 5. *Goodenough and Woodward in Linn. Tr. V.* 3. 124.

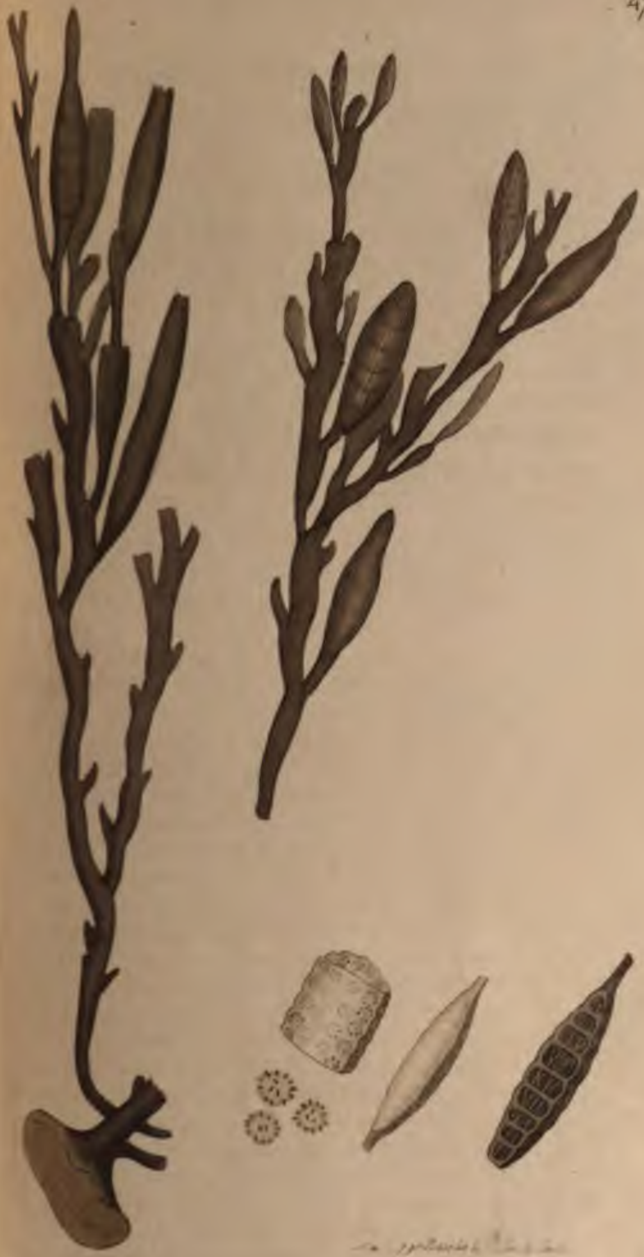
F. anguſtifolius, veſiculis longis ſiliquarum æmulis. *Raii Syn.* 48.

ON rocks and ſtones in the ſea, and frequently thrown up on the beach.

Root an expanded tubercle. Whole plant flat, of a dark olive brown. Stem compreſſed, without a rib, much and alternately branched, a little zigzag, from one to four feet long, ſmooth. Air-bladders on ſhort footſtalks, lanceolate, compreſſed, beaked, ſeparated within into many cells by tranſverſe partitions, each of which making a little ſtricture on the outſide gives the whole a jointed or pod-like appearance. The cells have alſo white fibres running acroſs them internally. The fructification is quite diſtinct from the above, conſiſting of cluſters of ſeeds ſtudded into, and imbedded through the ſubſtance of, ſeveral leaf-like ſolid proceſſes on footſtalks, reſembling the air-bladders except in being leſs beaked, not jointed, but on the contrary granulated on their ſurface by the projecting cluſters of ſeeds. This fructification appears to have been firſt rightly underſtood very lately by Mr. Dawſon Turner of Yarmouth, who favoured us with the ſpecimen here delineated; but upon examination every old ſpecimen in our poſſeſſion is in the ſame ſtate, particularly ſome gathered at Leith in the winter of 1781, for in that time of the year this tribe of plants generally produce their ſeeds.

The F. *ſiliquoſus* is often found infeſted with the *Sertularia geniculata* covering its younger branches.

474



[illegible]

15.

[2130]

FUCUS abrotanifolius.

Southernwood Fucus.

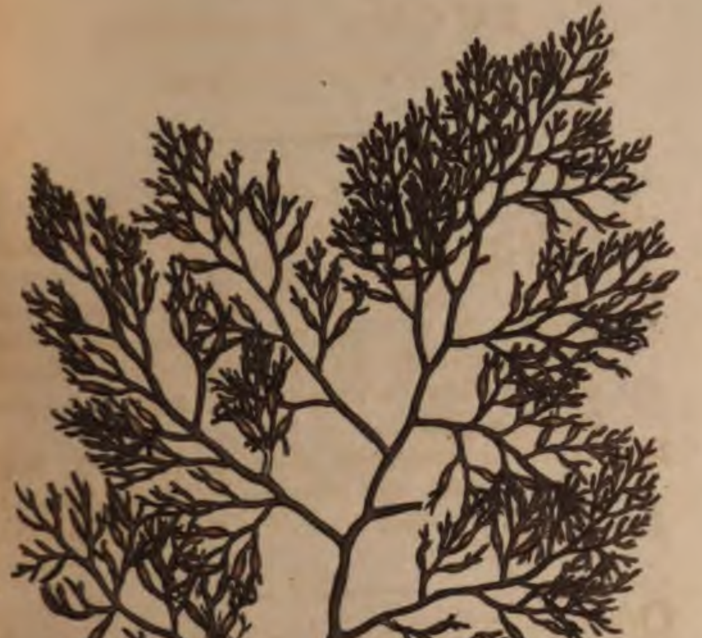
CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Frond thread-shaped, compressed, bipinnate. Leaflets pinnatifid, entire. Branches alternately forked; the uppermost bearing elliptical innate vesicles, with terminal, many-cleft, fruit-bearing segments.

Syn. Fucus abrotanifolius. *Linn. Sp. Pl.* 1629. *Huds,* 575. *Gooden. and Woodw. Tr. of L. Soc. v.* 3. 126. *Turn. Syn.* 66. *Hull.* 317. *Stackh. Ner.* 86. *t.* 14.

Our figure *No.* 1 was drawn from a specimen received by Mr. Woodward from Devonshire. The leafy bottom part of a younger plant *f.* 2, is the Mediterranean specimen, mentioned in Tr. of L. Soc. v. 3, 127; and *f.* 3 is the fructification in a very perfect state, sent by Mr. W. Borrer from Sussex in June 1804. There can be no doubt of the Linnæan specimen, gathered by Loefling in the British seas, being the same, though it wants the bottom leaves, nor do we perceive why our learned friends Mr. Turner and Mr. Wigg found any uncertainty about it; but however that may be, it is the original and only certain authority for this species. It is impossible to account for Linnæus's subsequent misquotation of Gmelin's *capensis,* Mant. 2. 508, which is totally different.—The present belongs to the same tribe with *F. fibrosus, t.* 1969, and agrees with that in colour. Frond 12 or 18 inches long, slender, compressed, often rough like a file at the base, and furnished in that part when young, with opposite or alternate, two-ranked, deeply pinnatifid, flat, entire leaflets, (for so, if the whole be a frond, as analogy shows, we must call them): doubly pinnate upwards, the pinnæ repeatedly and alternately forked, thread-shaped, spreading; the upper ones bearing small, elliptical, solitary, innate vesicles, each crowned with several cloven leaflets, in the blunter and more dilated of which numerous seeds are lodged in oblong clefts. We refer the reader to *F. discors, t.* 2131, for further remarks relative to he plant before us.



Mar. 1 1810 published by Js. Sowerby London.

[2131]

FUCUS discors.

Discordant Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Frond round, branched; the branches alternately pinnate, winged and serrated; upper ones almost capillary. Tubercles crowded, in the ultimate oblong segments.

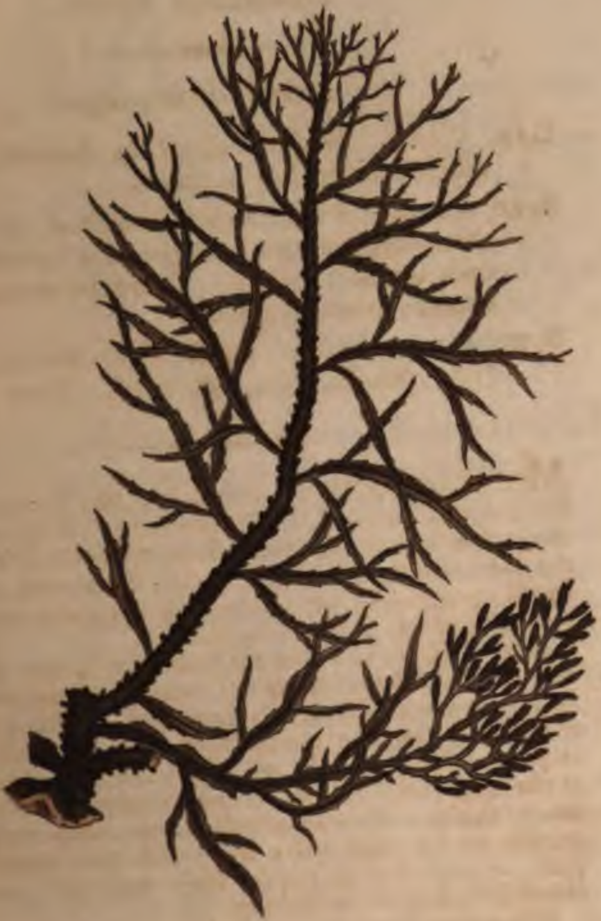
Syn. Fucus discors. *Linn. Syst. Nat. ed.* 12. *v.* 2. 717. *Stackh. Ner.* 108. *t.* 17. *Turn. Syn.* 70.

Mr. STACKHOUSE is recorded by Mr. Turner as the first finder of this *Fucus* on the British coasts.—It agrees with the two authentic and indubitable, though imperfect, specimens in the Linnæan herbarium, by which alone, with our worthy friend's permission, we ascertain this supposed species. We say *supposed* for the following reasons.

Mrs. Griffiths, to whom the submarine botany of England is so much indebted, assures us, from her repeated observations on the Devonshire coast, that the present is nothing more than *F. abrotanifolius*, as it appears in the early part of the summer, in places scarcely ever left exposed by the tide, except perhaps at the equinoxes. In this we find the segments of the leaflets much broader, with consequently a more conspicuous rib; the prickles on the main stalks larger and more abundant; the pods, or seed-bearing points, large and turgid, not always attended by hollow air-bladders.

When ripe, the seeds, as the abovementioned lady informs us, "escape from their pores, and surround the pods in a transparent mucus. In all the plants found late in autumn or in winter, as well as those from *shallow pools* at all seasons, the leaves or branches are more slender, and the parts of fructification smaller, but the resemblance in every other respect (betwixt this and *t.* 2130) is perfect. In winter, when the seeds are scattered, the decaying parts fall off, but the branches often continue to lengthen, and make vigorous shoots. Soon after, the fruit begins to appear, and the seeds are in a progressive state till the summer following. Some plants seem to have stood the storms of many winters."

2131



Mar 1 1810 published by Js Sowerby London

17.

[2169]

FUCUS granulatus.

Granulated Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Frond round, warty, very much branched: branches threadshaped, spinous; young ones linear, flat, entire, with a midrib. Tubercles crowded near the extremities, necklace-like, with a toothed point.

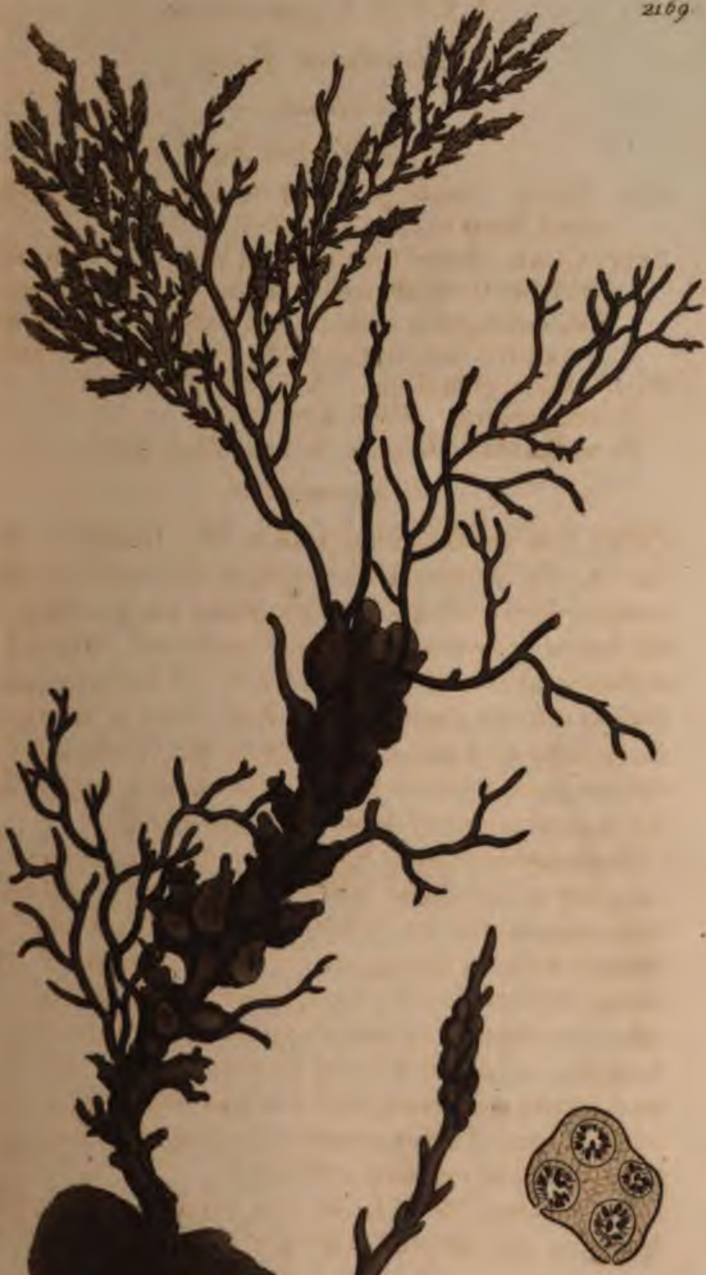
Syn. Fucus granulatus. *Linn. Sp. Pl.* 1629.
F. mucronatus. *Turn. Syn.* 73.
F. nodicaulis. *With. v.* 4. 111. *Hull.* 329.

SENT from the Devonshire coast by Mrs. Griffiths to Mr. Turner, who considers it as an excellent specimen of his *mucronatus*, under which he candidly admits the probability of his having confounded several different species. This is undoubtedly the *granulatus* described in *Sp. Pl.* and we presume to think that the *fœniculaceus* of *Linn. Trans. v.* 3. 134, on the authority of a specimen marked by Mr. Woodward, is a different plant, whatever Hudson's *concatenatus* may be, but it also seems to us very distinct from *granulatus*.

These species all nearly agree in their dark olive-brown colour, almost black in the dried specimen. The present has a firm expanded disk for its root, and the main stalk when old becomes warty, or knotty, in a very remarkable manner. The young branches are flat, linear, entire, with a midrib; the older ones extremely various in length, and in quantity of subdivisions, but all threadshaped, beset with little, sharp, scattered spines, and bearing near their extremities necklace-like oblong clusters of innate roundish tubercles, each opening by a pore, and lined internally with seeds.

F. granulatus, Tr. of L. Soc. v. 3. 131, is evidently by the description not this plant. See *t.* 2170.

2169



July 1 1810 published by Jas Sowerby London

18.

FUCUS barbatus.

Beard-like Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Frond round, very much branched, without spines: branches threadshaped. Tubercles crowded into oblong, terminal, sharp-pointed pods.

Syn. Fucus barbatus. *Gooden. and Woodw. Tr. of L. Soc. v.* 3. 128. *Turn. Syn.* 80. *Hull.* 317.

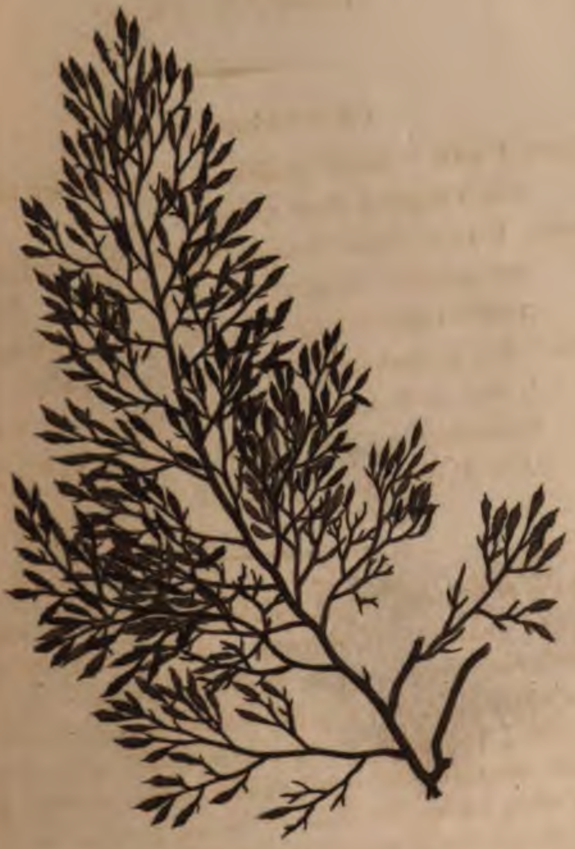
F. fœniculaceus. *Huds.* 575. *With. v.* 4. 87. *Gmel. Hist. Fucor.* 86. *t.* 2, A. *f.* 2.

Drawn from Mr. Woodward's own specimen, compared with one given by Mr. Hudson to Sir T. Frankland as his *fœniculaceus*, gathered on the Devonshire coast.

The whole plant is of a very dark olive brown, almost black when dry. The frond very much branched in an alternate manner, threadshaped, rather slender, almost capillary at the points when barren, destitute of spines, and, as far as we know, of any dilatation so as to resemble leaves. The fructification is abundant and very obvious, consisting of small, elliptical or oblong, pod-like clusters of tubercles, in each of which the seeds are lodged, doubtless in the manner of *F. granulatus, t.* 2169.

Mr. Turner considers the *granulatus* of the learned writers in *Tr. of L. Soc. v.* 3. 131, as a variety of this with rather less crowded tubercles. It is a Yarmouth plant, but not known to us.

2170



July 1 1810 published by Jas Sowerby London.

19.

FUCUS ericoides.

Heath-like Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

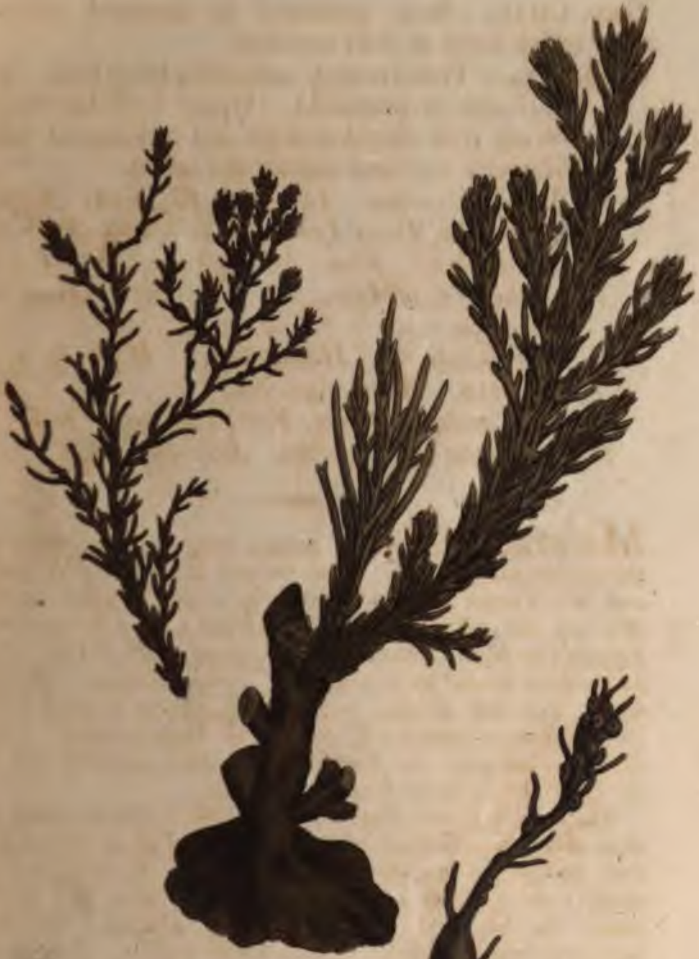
SPEC. CHAR. Frond round, repeatedly branched. Leaflets linear or pinnatifid. Upper branches slender, bearing oval innate vesicles and awl-shaped spines. Tubercles scattered among the spines.

SYN. Fucus ericoides. *Linn. Sp. Pl.* 1631. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 130. *Hull.* 317.
F. selaginoides. *Linn. Mant.* 134. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 132. *Hull.* 318. *Turn. Syn.* 85.
F. tamariscifolius. *Huds.* 576. *With. v.* 4. 86. *Hull.* 318. *Turn. Syn.* 88.
F. Erica-marina. *Gmel. Fuci,* 128. *t.* 11. *f.* 2.
F. foliis ericæ seu tamarisci. *Raii Syn.* 49.

MR. STACKHOUSE, it seems, long ago contended that the synonyms above belonged to one and the same species, and Mr. Turner assures us he is now of the same opinion. We are obliged to our kind friend last named for specimens gathered by Mrs. Griffiths on the marine rocks of Devonshire, and others found by himself on Yarmouth beach. We have never been able to find sufficient differences to mark even a distinct variety between *F. ericoides* and *selaginoides*. Indeed Linnæus adopted the former from other authors, and described only the latter from a specimen.

The root is a very firm orbicular disk. Whole plant of a deep olive brown, black when dry. Frond about a span high, very much and densely branched, round in every part, and tough; the bottom various in thickness from one to three lines; the branches slender and threadshaped. The lower branches bear crowded, narrow, linear leaflets, often an inch long, some of them cut and pinnatifid; these disappear, as Mr. Turner observes, by age. The principal part of the plant consists of other branches, closely beset with innumerable awl-shaped spines, intermixed with which, chiefly about their bases, are numerous little round sessile tubercles, each with a minute hollow at its summit. It fructifies in the summer.

1968



Jan. 1. 1809. Published by Jas. Sowerby, London.

20.

[1969]

FUCUS fibrosus.

Fibrous Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

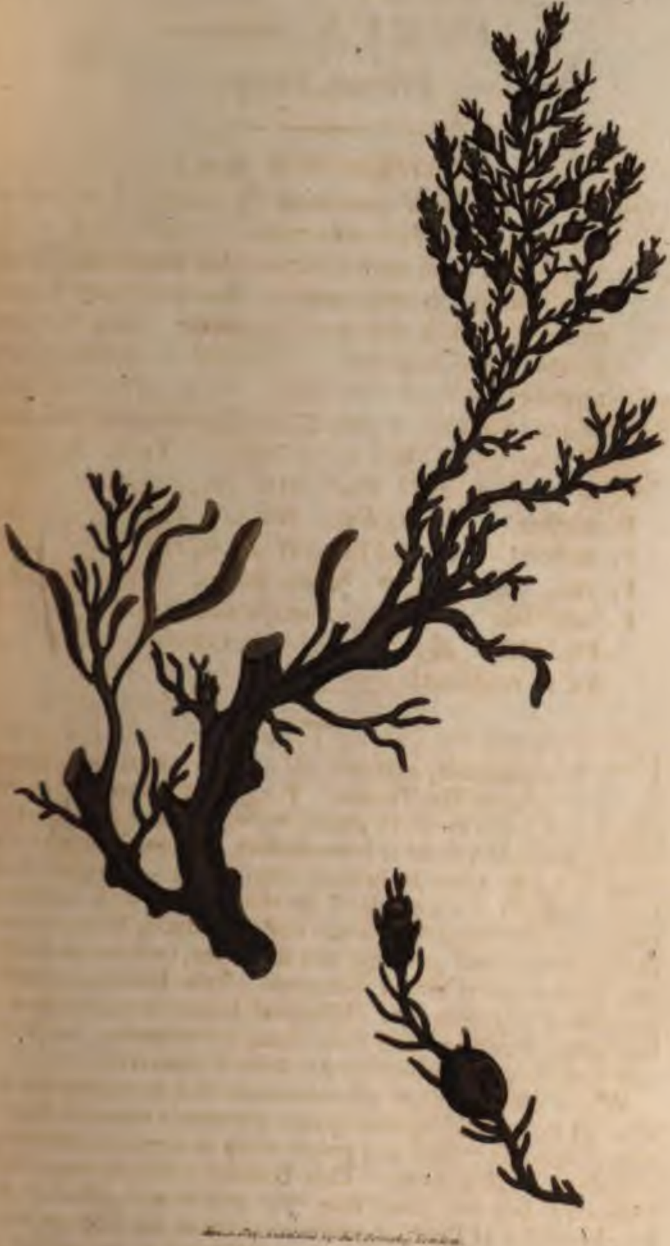
SPEC. CHAR. Frond round, repeatedly branched. Leaflets undivided and entire; the lower ones midribbed, linear; the rest setaceous. Vesicles oval, innate in the branches. Tubercles crowded, nearly terminal.

SYN. Fucus fibrosus. *Huds.* 575. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 137. *Turn. Syn.* 93. *With. v.* 4. 87. *Hull.* 318.
F. baccatus. *Gmel. Fuci,* 90. *t.* 3. *f.* 2.
F. setaceus. *Huds.* 575. *With. v.* 4. 86.
F. radicibus arborum fibrosis similis. *Raii Syn.* 49.
F. seu Acinaria maritima anglicana. *Bocc. Mus. di Fis.* 270. *t.* 6. *f.* 5? copied in Gmelin, *t.* 1. B. *f.* 2, for F. nodosus!

FOR this specimen, gathered on the south coast of England, we are obliged to Mr. Turner. The colour, according to that gentleman, is, in the fresh plant, "a subdiaphanous yellowish olive," but when dried it remains ever after nearly black. The frond is very much branched, from 1 to 3 feet high. Stalk thick and often compressed at the lower part; otherwise round, slender, zigzag. Lower leaflets stalked, linear, obtuse, entire, with a mid-rib; the rest setaceous, various in length. Mr. Turner observes that sometimes all the leaflets are linear, sometimes all setaceous. Elliptical innate vesicles, about a line long, occur here and there along the branches, and at the summits numerous tubercles are densely clustered.

When the leaves are all setaceous, this is supposed to be *F. setaceus* of Hudson, who quotes Boccone's miserable figure; which figure is copied and gratuitously enlarged by Gmelin as a variety of *F. nodosus*. This Boccone's description cannot authorize, but his plant may very well be our *fibrosus*. As he gathered it at Deal, it seems incumbent on English botanists to make something or other of his synonym, and this is one of those cases in which it is as profitable to believe as to examine.

1969



[illegible] Published by Jas. Sowerby London

21.

FUCUS ligulatus.

Green Strap-leaved Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

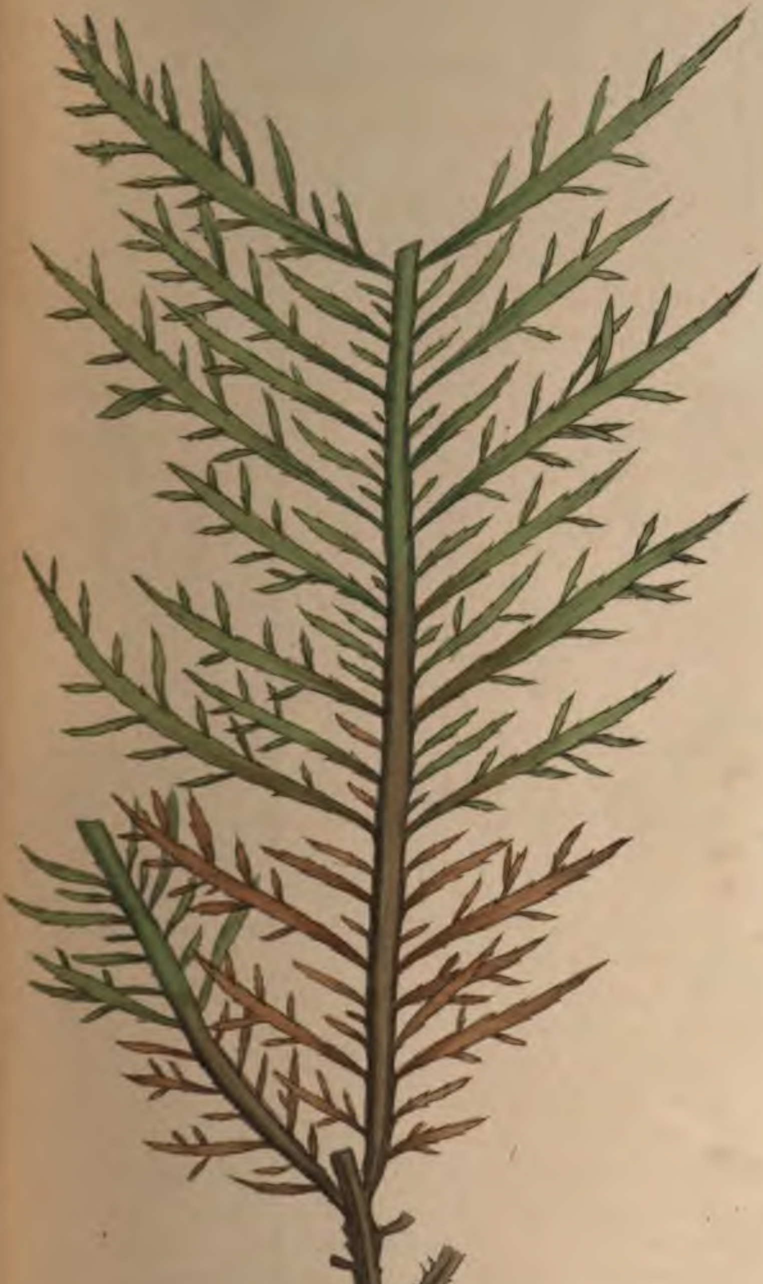
Spec. Char. Frond flat, without veins, somewhat cartilaginous, doubly pinnate: its segments linear, acute, opposite, fringed with spinous teeth.

Syn. Fucus ligulatus. *Lightf.* 946. *t.* 29. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 123. *Turn. Syn.* 99. *With. v.* 4. 101. *Hull.* 317.

F. herbaceus. *Huds.* 582.

For specimens of this Fucus, cast up on the Yarmouth beach, we are indebted to Mr. Turner and Mr. Wigg. Two or three years ago, after much stormy weather, they were remarkably abundant on that coast; otherwise the species is rare, and, as Mr. Turner observes, not noticed by foreign writers. It is mentioned as having also been found in Sussex, Northumberland, and Scotland.

Root small, supposed by Mr. Turner to be annual, as the plant is regularly thrown up by the sea chiefly from June to August. Frond from 2 to 6 feet long, flat, veinless, of a delicate pale green, turning to a light brown by age or exposure to the air, most elegantly divided, in a doubly or even triply pinnate manner. The main branches are linear, the ultimate ones approaching to lanceolate, as they taper to a point at each end. Their situation is nearly opposite, and they spread in two ranks. The edges are finely fringed with taper teeth. No fructification has been observed.



FUCUS esculentus.

Eatable Winged Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond simple, undivided, lanceolate, stalked, with a prominent mid-rib. Stalk winged with numerous, oblong, ribless leaflets; the uppermost covered with fructification.

SYN. Fucus esculentus. *Linn. Mant.* 135. *Huds.* 578. *With. v.* 4. 93. *Lightf.* 938. *t.* 28. *Turn. Syn.* 104.

F. tetragonus & teres. *Gooden. and Woodw. Tr. of L. Soc. v.* 3. 140. *Hull.* 318.

F. fimbriatus. *Gmel. Fuci*, 200. *t.* 29. *f.* 1, imperfect.

F. scoticus latissimus edulis dulcis. *Raii Syn.* 46.

THIS remarkable Fucus has long been known on the Scottish coast, where it is, according to Lightfoot, called Badderlocks, and the stalk is eaten both by men and cattle, being esteemed wholesome to the stomach. Its season is said to be September, but our specimens in fructification, which no botanist has yet seen, were sent by Mr. Brodie early this spring, 1807. The plant occurs also on the coasts of Cornwall, Anglesea, &c.

Root of thick radiating fibres, not much branched. Whole plant of an olive brown, or greenish, from a few inches to 10 feet in length. Stalk simple, cylindrical, terminating in a simple, lanceolate. undulated leaf, with a strong mid-rib, occasionally cylindrical or square, for we cannot but concur with Mr. Turner in believing these differences to be mere varieties. The upper part of the stalk, when at maturity, is winged with crowded, more or less numerous, oblong, ribless leaflets, in which Mr. Turner with his usual acuteness presumed the fructification might be found. My young friend Mr. J. D. Sowerby, by his own observation alone, detected it there, spreading over great part of both sides of the upper leaflets, in the form of a wide-extended swelling, in which the tubercles of seeds are perpendicularly imbedded.

21 V

23.

[1221]

FUCUS serratus.

Serrated Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond linear, with a central rib, forked, deeply and irregularly serrated: its summits cloven, flat; the barren ones obtuse; the fertile pointed.

SYN. Fucus serratus. *Linn. Sp. Pl.* 1626. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 143. *Turn. Syn.* 110. *Huds.* 576. *With. v.* 4. 91. *Hull.* 319. *Lightf.* 902. *Relh.* 478. *Velley, t.* 1. *f.* a—c.

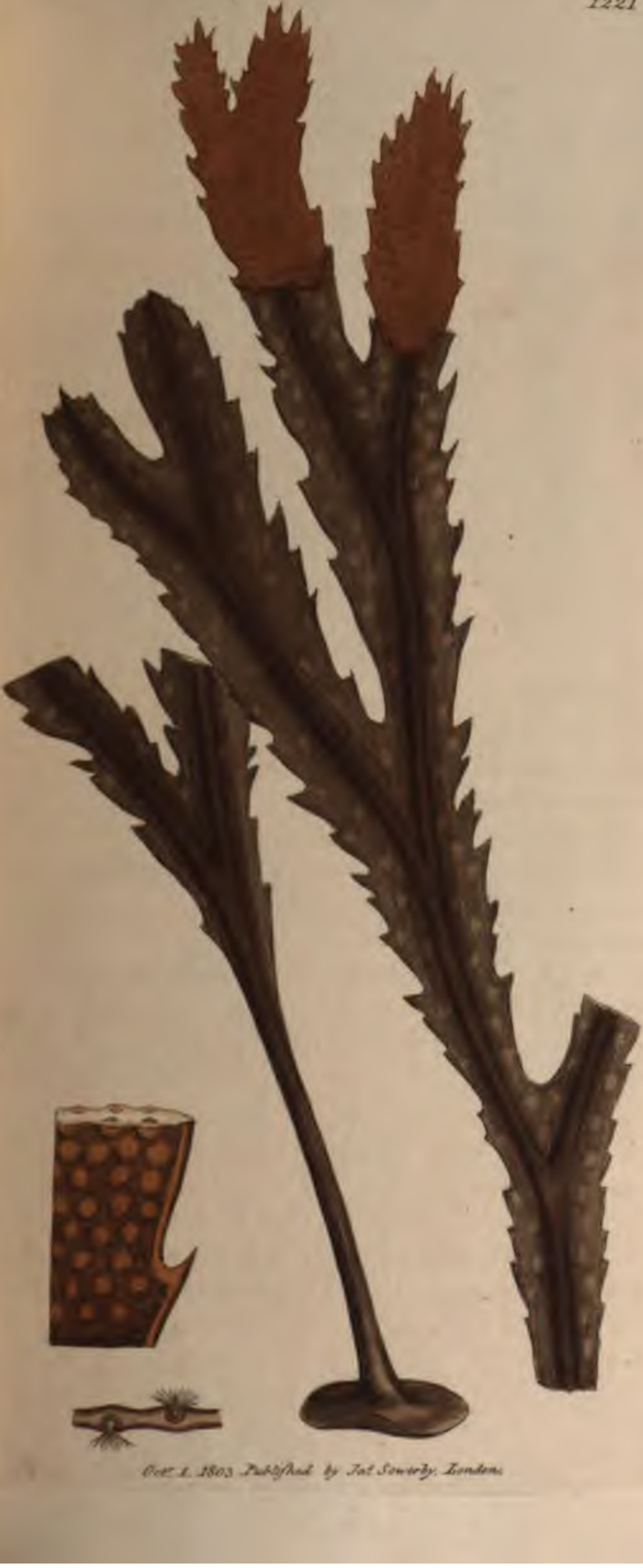
F. sive Alga latifolia major dentata. *Raii Syn.* 42.

β. Quercus marina humilis, latifoliæ serratæ similis. *Raii Syn.* 42.

COMMON every where on the British coast, either growing on rocks and stones, or washed up by the tide upon the sandy beach. It is perennial, and appears in fructification throughout the winter and spring.

This can be confounded with no other sea-weed. It is one of the largest species, agreeing in leathery substance, and olive-brown or black colour, with *F. nodosus, vesiculosus, canaliculatus, siliquosus, loreus,* and other perennial winter *Fuci.* The root is an expanded disk. Frond linear, repeatedly forked, from 2 to 6 feet long, having a strong central nerve, which at the base forms a naked round stem. The margin is strongly, sharply, but unequally, serrated. The extremities forked, blunt when barren, more acute when laden with fructification, which is of a dull yellow hue, slimy to the touch, and consists of an irregular congeries of capsules, imbedded in each side of the frond, rendering it twice as thick as in the barren part. Tufts of minute white fibres spring from pores scattered here and there over the frond, which Reaumur, not absurdly though erroneously, conceived to belong to the fructification.

1221



Octr. 1. 1803 Publiſhed by Jas. Sowerby, London.

24.

[1066]

FUCUS veſiculoſus.

Bladder Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

Spec. Char. Frond linear, dichotomous, entire, with a central rib, and furniſhed with ſeveral globoſe imbedded air-bladders: extremities cloven, tumid when in fructification.

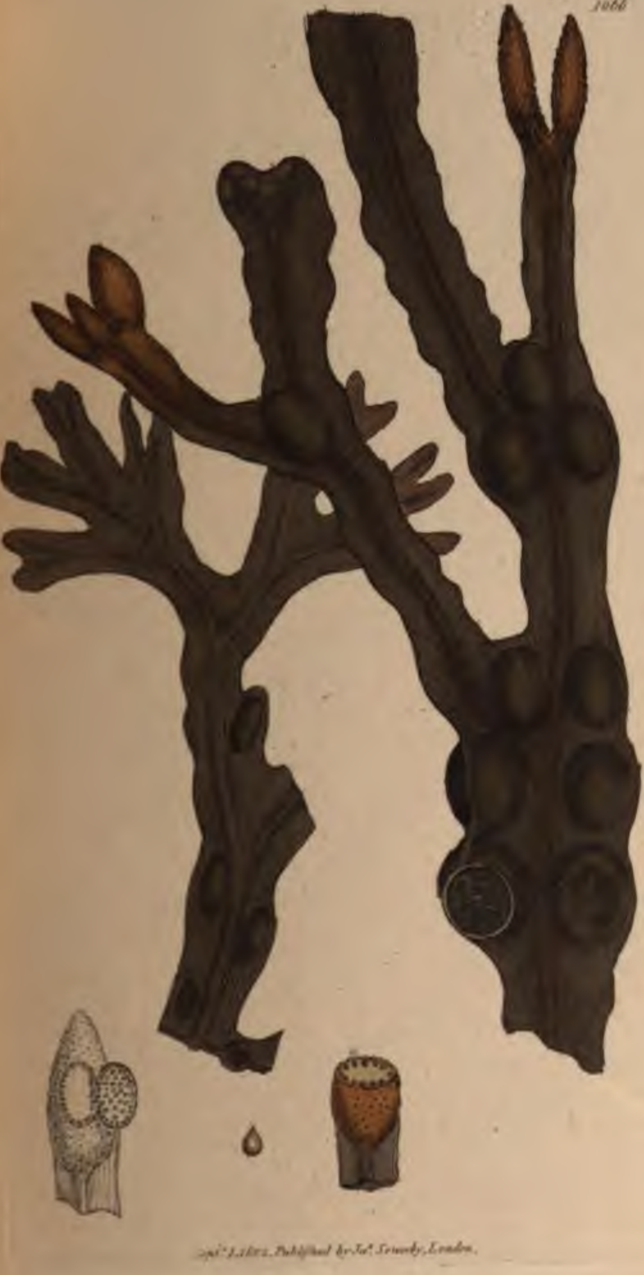
Syn. Fucus veſiculoſus. *Linn. Sp. Pl.* 1626. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 144. *Turn. Syn.* 117. *Hudſ.* 576. *With. v.* 4. 84. *Hull.* 319.
F. ſive Alga marina latifolia vulgatiſſima. *Raii Syn.* 40.

We cannot but agree with Dr. Goodenough, Mr. Woodward and Mr. Turner in reducing *Fucus divaricatus, inflatus* and *ſpiralis* of Linnæus, as well as *volubilis* of Hudſon (not of Linnæus), to the common *veſiculoſus*; and Mr. Turner has juſtly added the *linearis* of Hudſon, as well as ſome other varieties, or different ſtates, of the ſame plant. The whole ſubject, too extenſive for us here to enter upon, will be found fully illuſtrated in the Synopſis of Britiſh Fuci juſt publiſhed, to which we beg leave to refer our readers.

F. veſiculoſus is found on every ſhore, either growing on rocks and ſtones, or caſt up on the beach. Its brown colour and leathery texture, with the longitudinal rib, nearly agree with *F. ſerratus* and *ceranoides*: but the globular cellular air-bladders, imbedded in its ſubſtance between the membranes of the frond, form its diſtinguiſhing characteriſtic. When theſe bladders coaleſce into a heart-ſhaped figure at the forks of the frond, that circumſtance conſtitutes the *F. divaricatus*: when they are large and oblong they mark the *inflatus*, ſee *Plant. Ic. ex Herb. Linn. t.* 75. The ſeeds grow in the ovate, cloven, tumid, paler or yellowiſh extremities of the frond.

This ſea-weed is uſeful for manure, and is burnt into an impure alkaline ſalt called *kelp*, uſed in making ſoap and glaſs.

1066



Sept 1.1802. Publiſhed by Jas. Sowerby, London.

25.

FUCUS spiralis.

Spiral Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Frond linear, dichotomous, spirally twisted, entire, with a central rib: the fructifying extremities cloven, rounded and obtuse.

Syn. Fucus spiralis. *Linn. Sp. Pl.* 1627. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 147. *Huds.* 577. *With. v.* 4. 92. *Hull.* 319. *Lightf.* 911. *Stackh. t.* 5.

F. vesiculosus ε. *Turn. Syn.* 119.

F. spiralis maritimus major. *Raii Syn.* 41.

In *vol.* 15. *p.* 1066, we have assented to Mr. Turner's* opinion that this is a variety of *F. vesiculosus*, nor are we by any means determined to give up this point. Nevertheless, as many botanists think the two species distinct, and the excellent authors of the paper in the 3d vol. of the Linn. Society's Transactions, who unite many others to *vesiculosus*, have kept this separate, we are induced, by the persuasion of Mr. Turner himself, to publish the present figure.

Our specimens were found by Mr. W. Borrer on stones and planks in Shoreham harbour, Sussex, in September last, growing about high-water mark, and always in such situations as to be exposed to the air after every tide. Their colour and general appearance agree with *F. vesiculosus*, but the whole plant is lower and more bushy, and spirally twisted, though the last is not a very peculiar or constant character. The more remarkable distinctions are the almost total want of air-bladders, and the round blunt form of the yellow extremities where the seeds are lodged. In one of the Linnæan specimens indeed some of these extremities are more oblong, but they are still obtuse and rounded at the ends.

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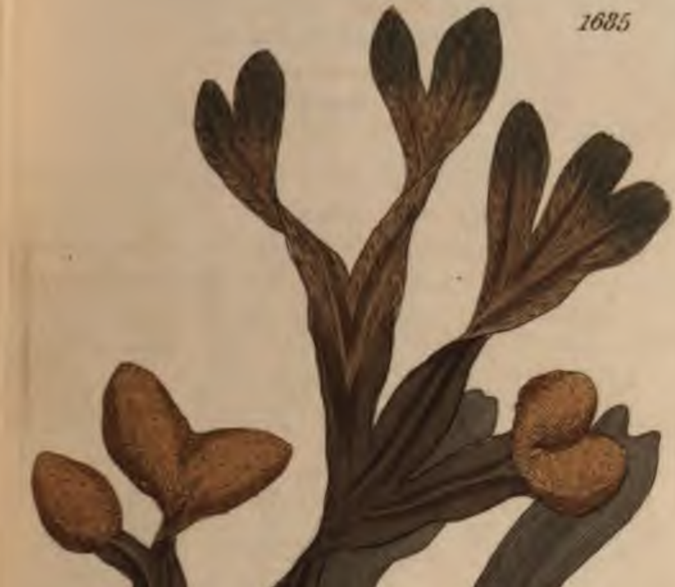
* We there erroneously included Dr. Goodenough and Mr. Woodward in this opinion, as far as regards *F. spiralis*.

1685



[illegible] Published by Ja.s Sowerby, London

26.

FUCUS ceranoides.

Buck's-horn Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Frond somewhat forked, linear, entire, olive-brown, with a central rib, pinnatifid; its segments radiated: extremities tumid when in fructification, linear-lanceolate, pointed.

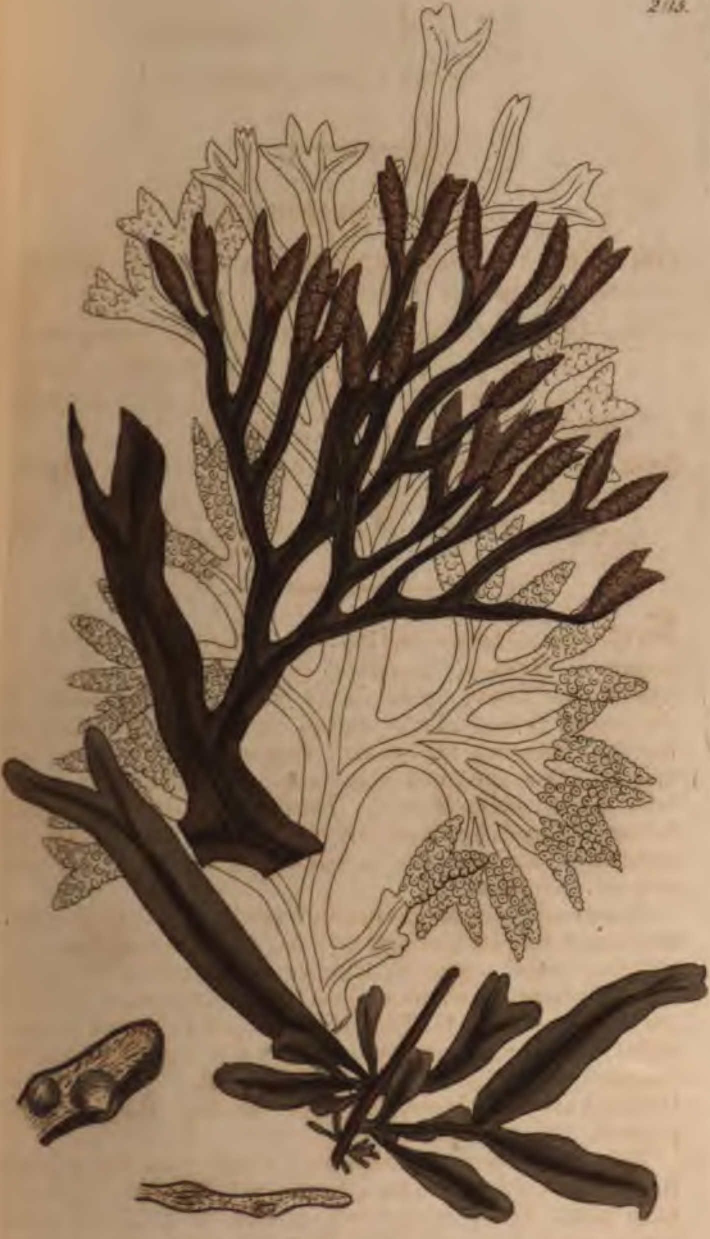
Syn. Fucus ceranoides. *Linn. Sp. Pl.* 1626. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 149. *Turn. Syn.* 136. *Hist. Fucor. v.* 2. 51. *t.* 89. *Hull.* 320.

Not very common on the coasts of Britain, nor was it known to Hudson, Lightfoot, or any other British botanist (the *crispus* having been always mistaken for *ceranoides*) till the present Bishop of Carlisle and Mr. Woodward, on seeing the true Linnæan specimen, recognised it as a Hampshire species. Our specimen was communicated by Mr. Turner from Shoreham in Sussex. To this learned botanist we are further obliged for showing the *linearis* of Hudson and *distichus* of Lightfoot to be not the present plant, but a variety of *vesiculosus.*

F. ceranoides is unquestionably nearly related to this last-mentioned very variable species; but its pinnatifid form, and radiating lateral segments, which make a segment of a circle, and at whose extremities alone the fructification is found, are considered by Mr. Turner as sufficient to keep it distinct, added to the usual narrowness of such segments, and the constant absence of air-vessels throughout. The barren extremities are very obtuse, but those bearing fruit are sharp-pointed, and often forked.

This species is more like a buck's horn than that to which Ray and his contemporaries gave the epithet *ceranoides*, though their plant, being erroneously quoted by Linnæus, caused him to adopt the name. We therefore see no inconvenience in preferring his nomenclature, in itself, to theirs.

2115.



[illegible] publish'd by Js Sowerby London

27.

FUCUS membranaceus.
Pellucid Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

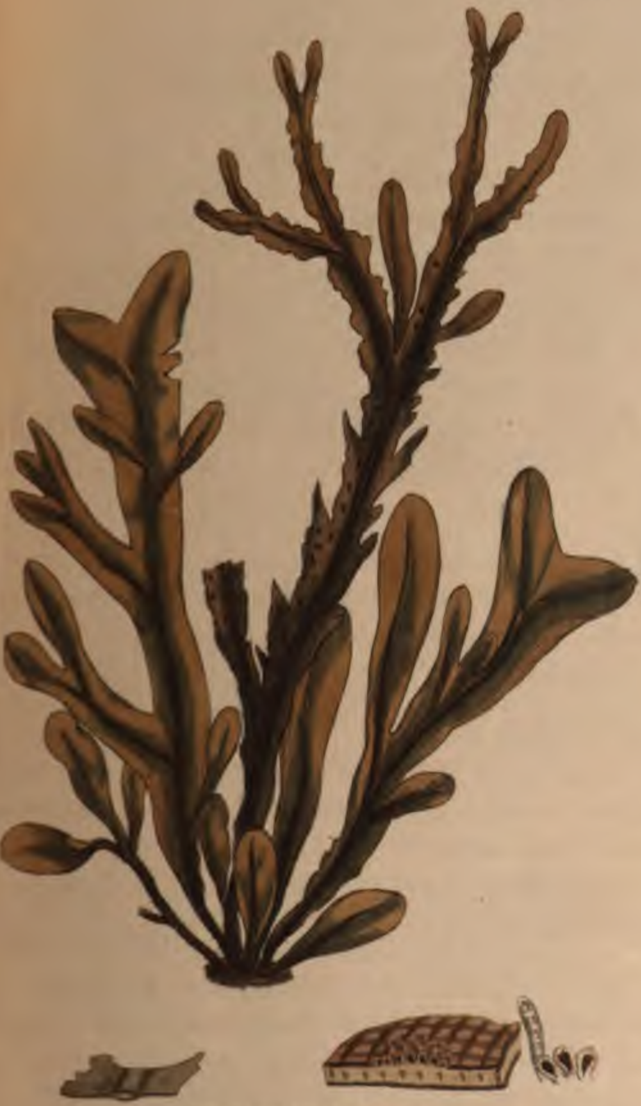
Spec. Char. Frond linear, forked, membranous, pellucid, greenish brown. Mid-rib slightly prominent, here and there proliferous. Fruit in convex superficial dots.

Syn. Fucus membranaceus. *Stackh. Nereis*, 13. *t.* 6. *Turn. Syn.* 141. *With. v.* 4. 93. *Hull.* 328.

SENT from the Scottish coast by our kind friend James Brodie, Esq. Mr. Stackhouse found it at Sidmouth, Devonshire, and his description is the first that ever appeared.

Several fronds, 6 or 8 inches high, arise from a small callous root. They are light greenish brown, forked, very thin and membranous, undulated, often torn; furnished with a strong central midrib, which is slightly prominent, and here and there proliferous: the extremities are somewhat rounded. The fructification is scattered over the frond in small roundish convex dots, the capsules or tubercles crowded, obovate, and often accompanied by what seems the rudiment of a *Conferva*, as described by Mr. Stackhouse, and first ascertained by the accurate Mr. Woodward.

1758



June 1. 1807. Published by Jas. Sowerby London.

28.

FUCUS alatus.

Winged Crimson Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond membranous, thin, repeatedly and alternately branched, crimson; its segments alternately decurrent down the midrib. Fruit in lanceolate leaflets.

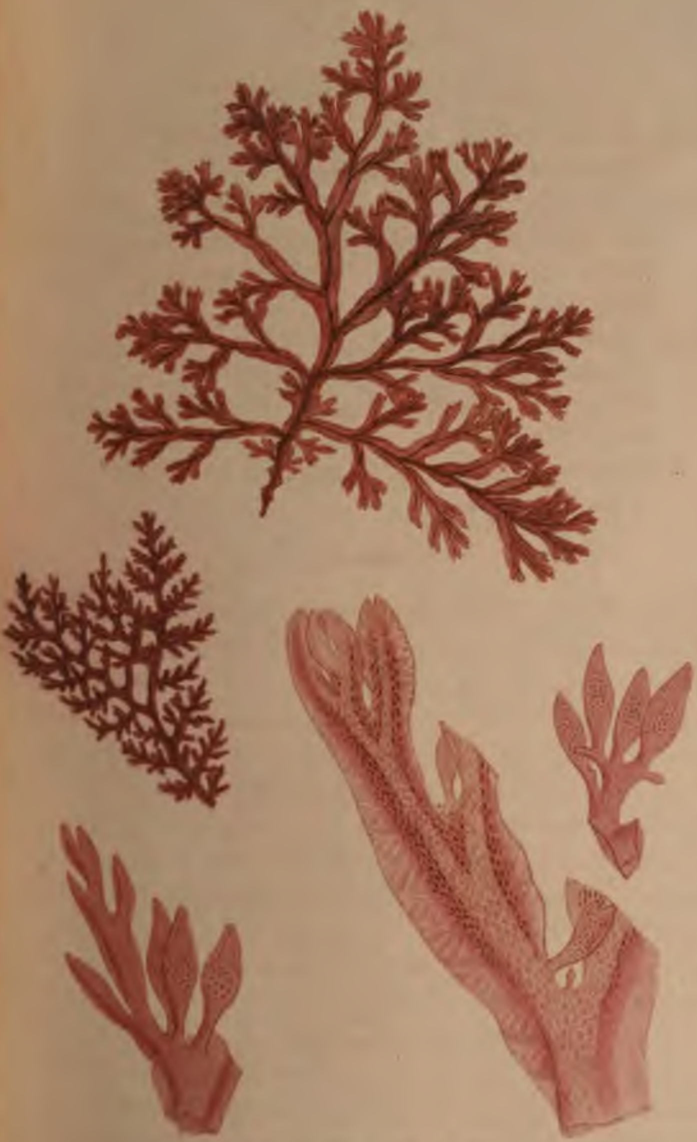
SYN. Fucus alatus. *Linn. Mant.* 135. *Turn. Syn.* 144. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 142. *Huds.* 578. *With. v.* 4. 95. *Hull.* 319. *Lightf.* 951. *Stackh. t.* 13. *Gmel. Fuci, t.* 25.

F. dichotomus parvus, costatus et membranaceus. *Dill. in Raii Syn.* 44.

A MOST beautiful species, common on our coasts, and generally admired by all who have eyes for the works of nature. Mr. Turner presumes it to be perennial.

The fronds are 3 or 4 inches high, growing many together from a small flat disk, repeatedly branched in an alternate or forked manner, consisting of a dark midrib, bordered with a fine delicate membrane, running down it on each side in alternate, interrupted, but otherwise entire, portions; the summits are notched, the rib gradually vanishing there. Several little, axillary, stalked, lanceolate leaflets are found occasionally, especially on old shabby specimens, each containing in its centre, (the rib being wanting,) a round cluster of seeds. These we have received from Mr. Brodie and Mr. Drummond. Mr. Turner has favoured us with a specimen in which the seeds are disposed in a line on each side of the midrib of the uppermost young branches. The colour of the whole is a beautiful crimson, more or less deep, sometimes greenish in decay.

1837



Jan. 1. 1808. Published by Jas. Sowerby London.

9

[1241]

FUCUS dentatus.

Toothed Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Frond membranous, branched, alternately pinnatifid, obscurely ribbed: ultimate branches linear, sharply toothed at their extremities. Fruit clustered.

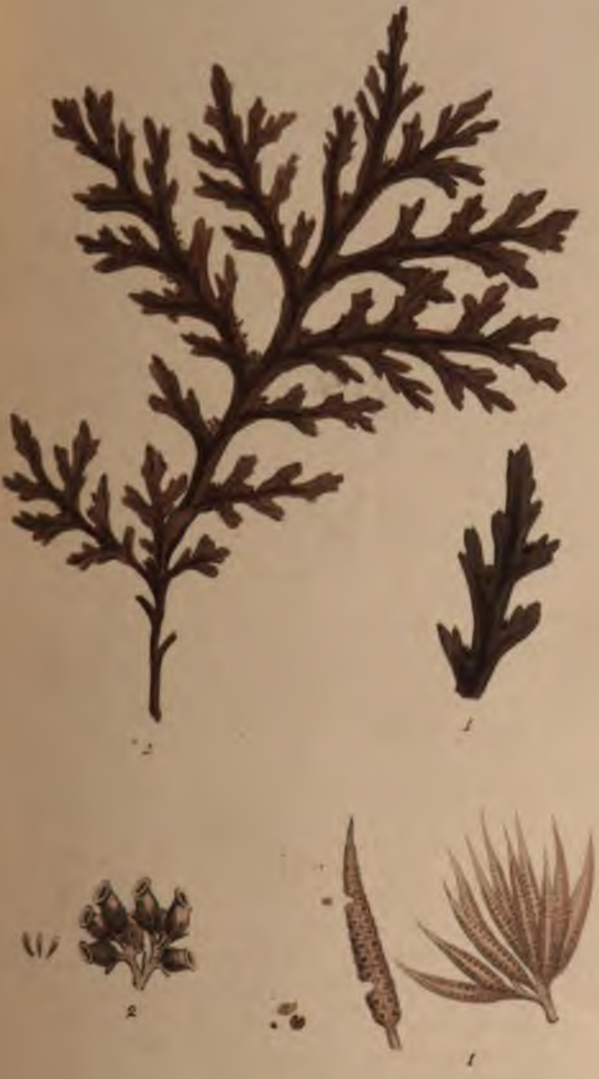
Syn. Fucus dentatus. *Linn. Mant.* 135. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 158. *Turn. Syn.* 149. *Huds.* 582. *With. v.* 4. 102. *Hull.* 320. *Lightf.* 952. *Stackh. t.* 15.

F. membranaceus rubens, foliolis latiusculis ad extremitates dentatis. *Moris. sect.* 15. *t.* 8. *f.* 5.

From one of the specimens gathered by Mr. R. Brown on the coast of Ireland, and alluded to in Mr. Turner's Synopsis, our figure No. 1 has been engraved. No. 2 was found in Scotland by Mr. J. Reid. We have met with this species at the Frith of Forth, but it is justly reckoned among the rarer kinds.

The frond rises from a callous disk to the height of 4 or 5 inches, sometimes more, and is doubly pinnatifid in an alternate order, flat and membranous, though not very tender. A strong mid-rib is visible in its lower part, though much compressed, and becoming imperceptible in the ultimate branches, which are linear, or inclining to a wedge-shape, sharply toothed at their extremities. The proper fructification is here seen on Mr. Brown's specimen, consisting of axillary clusters of pointed pods, each containing 2 rows of numerous seed-bearing tubercles. On Mr. Reid's are clusters of a different kind of tubercles, hitherto nondescript, nor has any conjecture been formed concerning them. We should guess them to be pods rendered abortive, either for want of impregnation, or by the injury of some marine animal. The colour of the whole Fucus is a dark reddish brown, becoming a pale pink in the more delicate parts.

1241



Novr 1. 1803. Published by Jas Sowerby, London.

FUCUS laceratus.

Endive-leaved Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. Seeds produced in clustered tubercles, which burst at their summits.

Spec. Char. Frond membranous, thin, branched and [illegible], veiny at the base; branches linear, obtuse, waved and jagged. Tubercles imbedded, scattered.

Syn. Fucus laceratus. *Gmel. Fuc.* 179. *t.* 21. *f.* 4. *Turn. Syn.* 132. *Goodenough and Woodward. Tr. of Linn. Soc.* v. 3. 155. *Hull* 320.

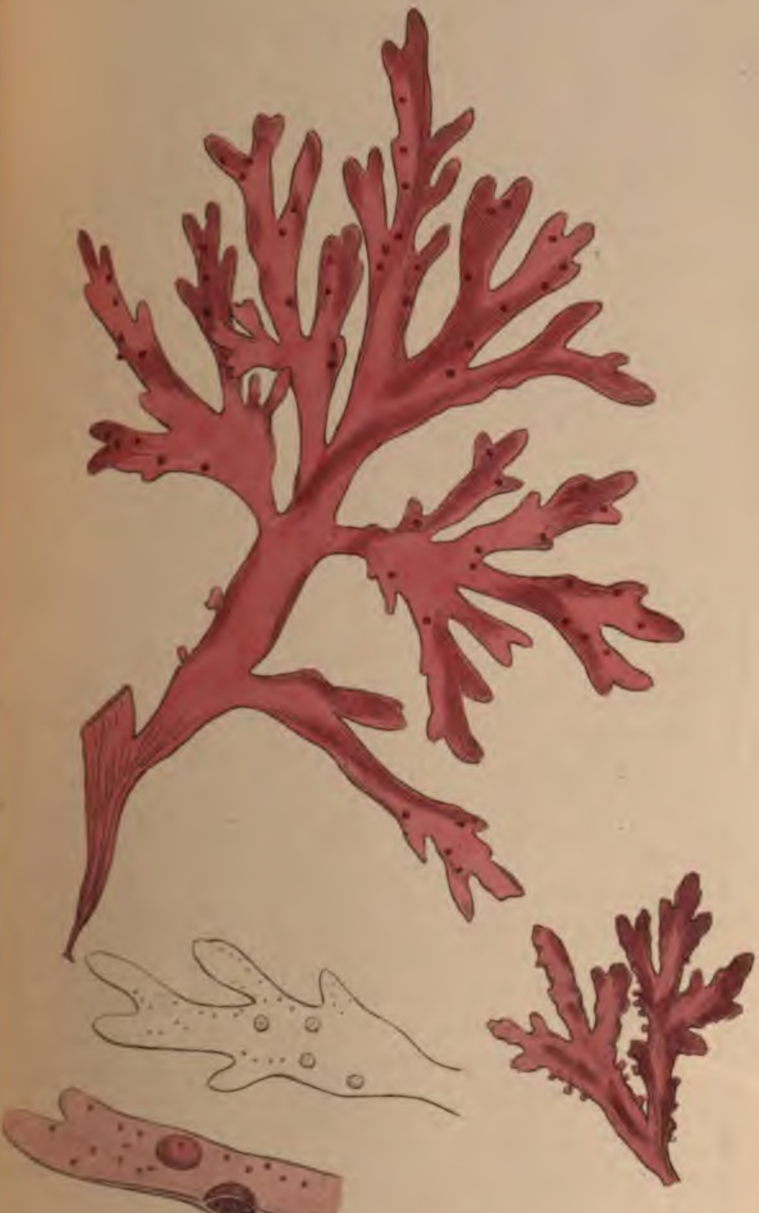
F. crispatus. *Huds.* 580.

F. laciniatus var. 1. *With.* v. 4. 102.

F. endiviæfolius. *Lightf.* 948. *t.* 32. *f.* 2. *With.* v. 4. 123.

ON rocks and stones on most parts of the British coast in the latter part of summer, perfecting its seeds in autumn.

The plant grows from a minute hard tubercle, and in a young [illegible] it is fixed by its edges, in a peculiar manner (as Mr. Turner observes) upon the stems of surrounding plants. The whole frond is very thin and delicate, branched immediately from the base, [illegible], waved, and curled, of a [illegible]; its ends obtuse; its margin either entire or minutely [illegible]; its base marked with dark, [illegible], anastomosing veins, which vanish two or three inches from the root, and the rest of the frond is [illegible] except when seen under a microscope, when its whole surface appears a kind of net-work. The seeds grow in small, scattered, dark-red, slightly prominent tubercles, imbedded in the frond, chiefly situated near the edges of the uppermost segments.



Sept.r 1. 1802 Published by Jas. Sowerby London

31

FUCUS laciniatus.

Jagged Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

Spec. Char. Frond membranous, branched, veinleſs; branches dilated, palmate, obtuſe, flat. Tubercles in the minute leafy fringe.

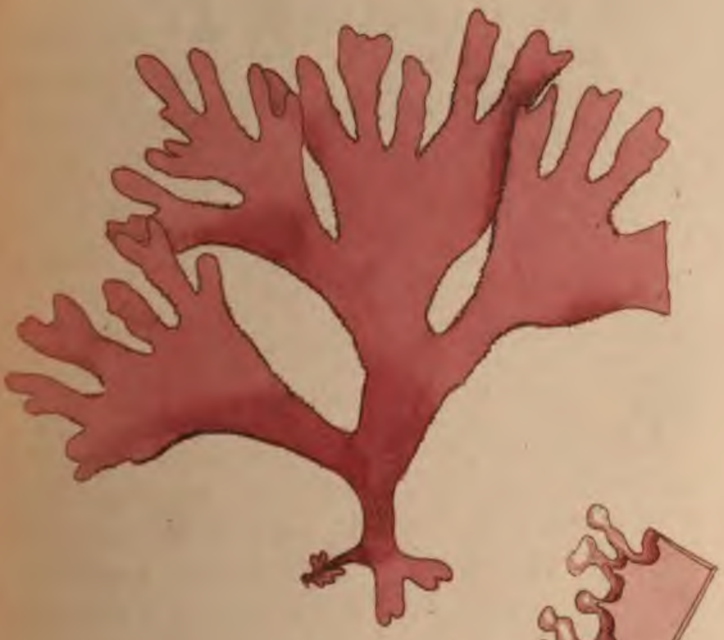
Syn. Fucus laciniatus. *Hudſ.* 579. *Turn. Syn.* 161. *Witb. v.* 4. 103. *var.* 2. *Lightf.* 947.

F. laceratus γ. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 156. *Hull.* 320.

F. ciliatus. *Gmel. Fuci,* 176. *t.* 21. *f.* 1.

THIS is found on ſubmarine rocks and ſtones, but leſs commonly than the laſt, of which many recent botaniſts have conſidered it as a variety. Mr. Turner however has ſeparated them. According to his obſervations the preſent ſpecies fructifies earlier, viz. from February to May. It is of a leſs membranous texture, rather more opaque in colour, entirely deſtitute of veins or ribs, ſcarcely reticulated in any part of its ſubſtance; its form is alſo more dilated and palmate, flat, not undulated, at the margin. When perfect the edge becomes thickly fringed with abrupt leafy undulating proceſſes, in which Lightfoot aſſures us the ſeeds are lodged. This we have not been ſo fortunate as to ſee; but, if correct, it leaves no doubt as to the certainty of the ſpecies.

1068



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32.

FUCUS cristatus.

Crested Tufted Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Frond membranous, reddish, compressed, veinless, repeatedly branched; branches alternate, decurrent, somewhat forked. Capsules small, globular, terminal.

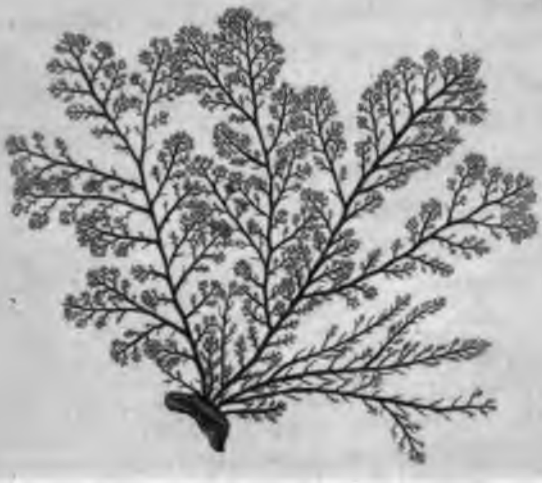
Syn. Fucus cristatus. *Turn. Hist. Fucor.* 48. *t.* 23.
F. crispatus. *Linn. Syst. Nat. ed.* 12. *v.* 2. 718.

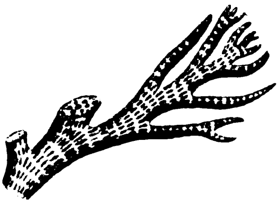
Sent by Miss Hutchins from Bantry Bay, Ireland, to Mr. Turner, by whose persuasion we hasten to communicate to the public so interesting a discovery, and by whose weighty authority we are led to refer this *Fucus*, his variety γ, to the *cristatus* of the Linnæan herbarium.

Our present plant is when dry of a dull darkish brown, but like the original *cristatus*, it is redder when fresh. The numerous fronds, 2 or 3 inches high, are much and repeatedly branched; the branches alternate, decurrent; the uppermost forked and acute. The whole is compressed, but not flat, tubular within, and seeming to be composed of short transverse furrowed joints, in the manner of *Conferva nigrescens*, *t.* 1717, and others. Mr. Turner indeed observes that "too much confidence is not to be placed in these joints," and that they are sometimes wanting, or we should have referred our plant at once to *Conferva*. Its fruit is unknown.

With respect to *Fucus cristatus* in its usual form, as figured by Mr. Turner from the Linnæan herbarium, its name is there so written as to look like *crispatus*, and was so transcribed and published by Linnæus himself, nor can any thing be more apposite than his account of it in his *Systema;* but Murray, from total ignorance and inattention in compiling his editions of *Syst. Veg.*, quotes *crispatus* of *Fl. Dan. t.* 826; and the *F. crispatus* of Wulfen in *Jacq. Coll. v.* 3. is still a different species from both.

1925





[illegible] Published by Ja.s Sowerby London.

CDIX.

[773]

FUCUS *bifidus.*

Cloven Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds produced in cluſtered tubercles, which burſt at their ſummits.*

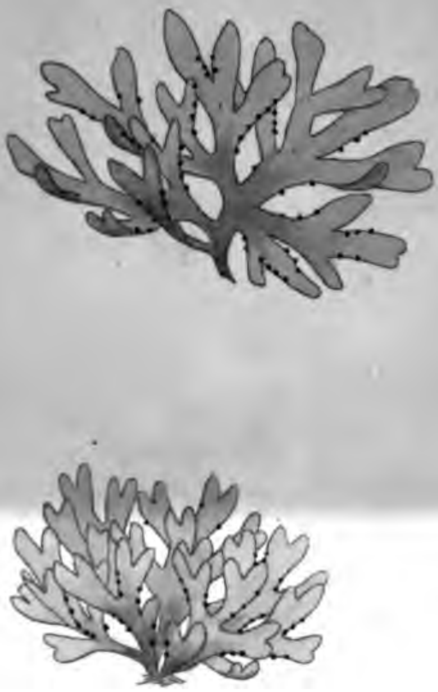
Spec. Char. Fronds veinleſs, membranous, dilated, cloven; their ſegments divaricated and blunt. Tubercles marginal, ſcattered.

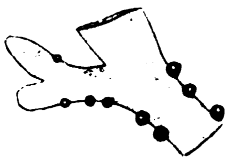
Syn. Fucus bifidus. *Hudſ.* 581. *With. v.* 4. 103. *Hull.* 320. *Goodn. and Woodw. in Linn. Tranſ. v.* 3. 159. *t.* 17. *f.* 1.

FIRST obſerved by Mr. Hudſon on ſubmarine rocks and ſtones on the Hampſhire coaſt, where Dr. Goodenough has likewiſe gathered it. Mr. Woodward found the ſame growing at Cromer. Our ſpecimens, waſhed up on the Yarmouth beach, have been communicated by Mr. D. Turner.

This Fucus is very little known, and it is an inſtance of Mr. Hudſon's penetration to have determined it as diſtinct without the aſſiſtance of the fructification, which he ſeems never to have ſeen, but which decidedly marks the ſpecies. The root is ſmall and fibrous. Fronds an inch or two in height, of a thin membranous texture, without vein or rib; their colour a light purpliſh red; their margin ſmooth and entire; their form ſomewhat wedge-ſhaped, cloven once, twice, or more into two bluntiſh lobes. The tubercles of ſeeds are ſcattered more or leſs cloſely along the edge of the frond, and are globular, prominent, but very ſmall, red, turning black as the ſeeds ripen.

774





34

[1069]

FUCUS ciliatus.

Ciliated Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

Spec. Char. Frond membranous, tough, pinnatifid, clothed and fringed with ſcattered, awl-ſhaped, moſtly ſimple, proceſſes, bearing the ſeeds in a globular tubercle.

Syn. Fucus ciliatus. *Linn. Mant.* 136. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 160. *Turn. Syn.* 169. *Hudſ.* 580. *Hull.* 321. *Lightf.* 944.

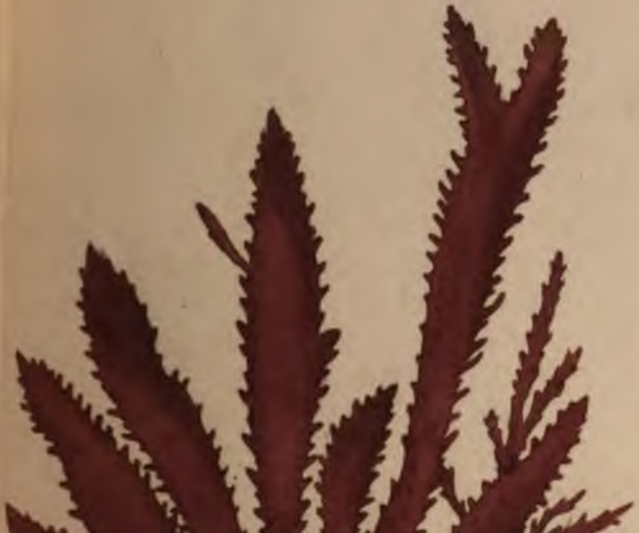
F. holoſetaceus. *Gmel. Fuci,* 177. *t.* 21. *f.* 2. *With. v.* 4. 104.

F. membranaceus rubens anguſtifolius, marginibus ligulis armatis. *Raii Syn.* 47.

NOT uncommon on the coaſt, eſpecially in the ſouth and weſt of England, bearing its fruit in the winter months.

Root of many branching round fibres. Frond membranous, but more inclining to coriaceous than in the two laſt, of a dark opaque red; its form more or leſs regularly pinnatifid, very various in breadth, its ſegments acute; the edges fringed, and the ſurface more or leſs thickly clothed, with awl-ſhaped, ſpreading, moſtly ſimple, proceſſes, ſome of which bear the ſeeds in a ſolitary globular tubercle, generally, but not always, terminal. *F. jubatus* of the *Linn. Tranſ.* ſeems, as Dr. Goodenough ſuſpected, a variety of this with long luxuriant barren ciliæ. Some very ſlender ſpecimens of *F. ciliatus*, ſent by Sir T. Frankland from Devonſhire and the Iſle of Wight, (ſee our figure) might be taken for another ſpecies, were it not for intermediate ones which prove them not to be diſtinct.

1069



Sept. 1. 1802. Published by Jas. Sowerby London.

35.

[1306]

FUCUS palmatus.

Red Palmate Fucus, or Dulse.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

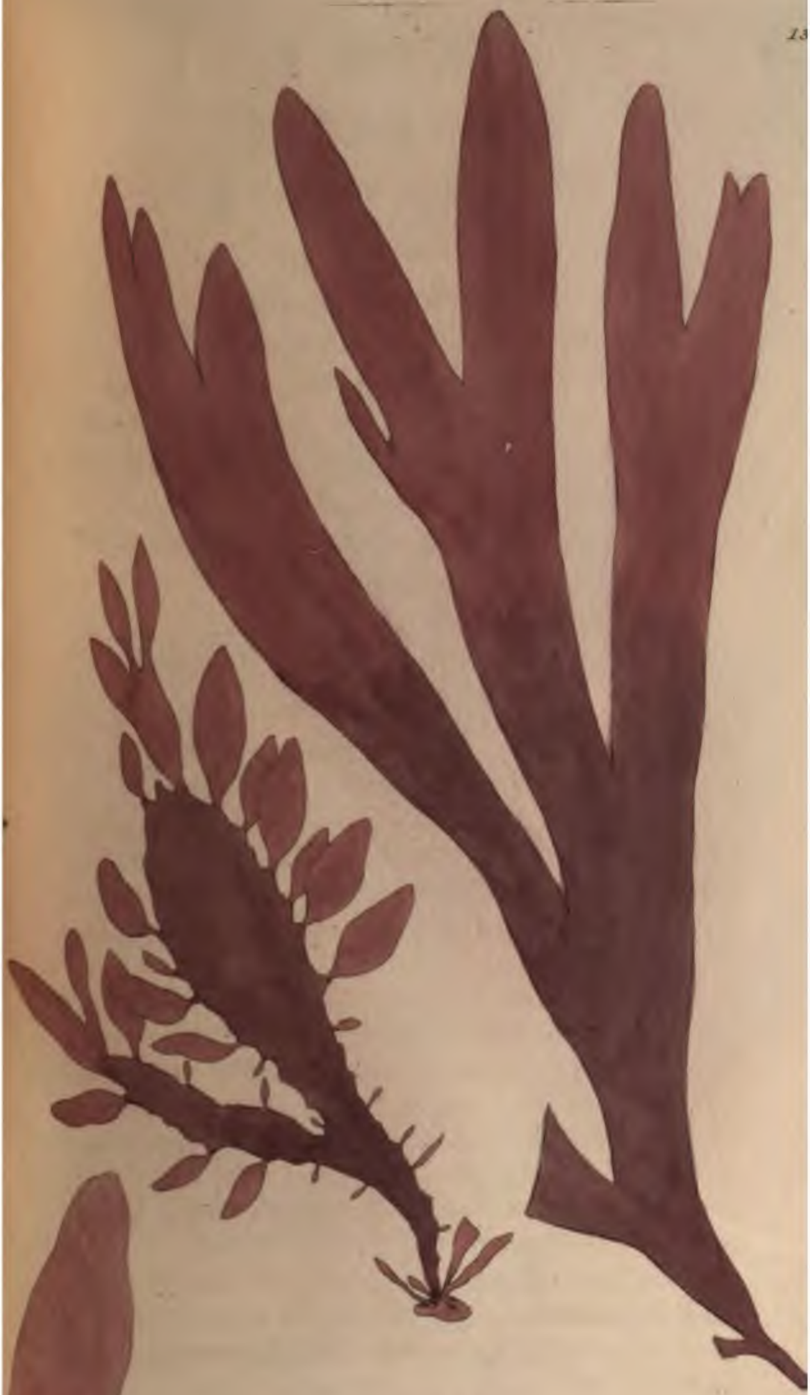
Spec. Char. Frond membranous, palmate, smooth on both sides: its segments oblong and nearly simple.

Syn. Fucus palmatus. *Linn. Sp. Pl.* 1630. *Gooden. & Woodw. Tr. of Linn. Soc. v.* 3. 163. *Turn. Syn.* 175. *Huds.* 579. *Hull.* 321. *Lightf.* 933. *t.* 27.
F. membranaceus ceranoides. *Raii Syn.* 46.
Ulva palmata. *With. v.* 4. 123.

Not uncommon on the sea coast, particularly the western parts of Scotland; nor is it less frequent in Wales and the west and south of England.

From a small callous disk spring one or more fronds, of a dull brownish crimson uniform hue, which from a taper wedge-shaped base are dilated into a broad flat form, soon cloven and divided in a palmate manner. The segments are oblong, entire at the margin, rather obtuse and often cloven at the tip. Sometimes a variety occurs fringed in a proliferous manner with small oblong or elliptical leaflets. The whole frond is about a span high; the substance membranous, or somewhat coriaceous, without rib or vein. The seeds are described as lodged in gaping tubercles scattered on the surface; and from Dr. Goodenough and Mr. Woodward having described the seeds as sometimes dispersed over the whole frond, Dr. Withering was induced to remove this sea-weed to the *Ulvæ*.

It is eaten, as well as that in our following plate, by the Irish and Scotch in various ways, and called Dulse or Dulish. In Edinburgh it is sold in the markets, and eaten raw an hour or two before dinner.



May 1. 1804 Publish'd by Jas. Sowerby London.

[1307]

FUCUS edulis.

Red Leathery Fucus, or Dulse.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Frond leathery, wedge-shaped, nearly undivided, smooth on both sides, rounded at the summit, entire at the margin.

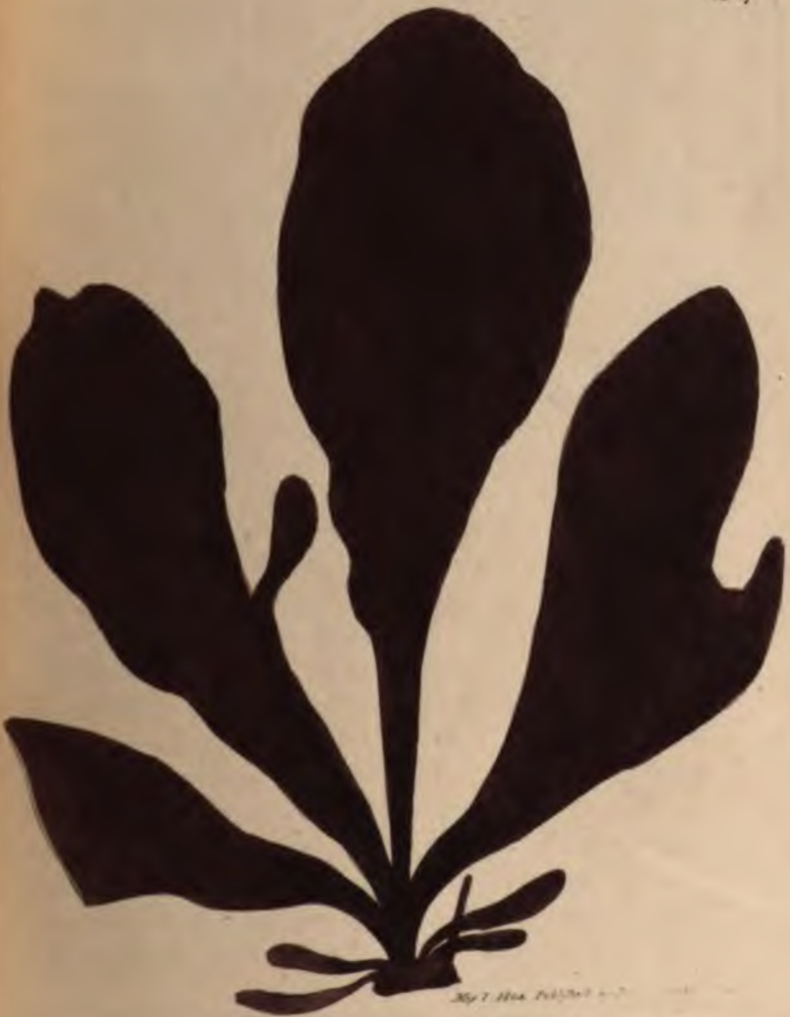
Syn. Fucus edulis. *Turn. Syn.* 180. *With. v.* 4. 101. *Hull.* 329. *Stackh. t.* 12.
F. palmatus β. *Lightf.* 935.
F. scoticus latissimus edulis dulcis. *Raii Syn.* 46.

Mr. TURNER has received this from Dover, Cornwall, and North Wales. We have collected it on the Leith shore; but it is less frequent there than the *palmatus*, which last we can confidently assert to be the species most commonly eaten raw at Edinburgh, however preferable that now before us may be for culinary purposes, on account of its more fleshy texture and abundant mucilage.

It differs from the preceding in being thicker and more coriaceous, consequently of a darker hue when held against the light; but is more particularly distinguished by its obovate obtuse undivided form, scarcely cloven or lobed, by no means palmate. Old specimens are often very large, a foot or more in length and several inches wide, and they are generally found perforated, or eaten away, as it should seem, by marine animals.

When moistened after having been dried this species more particularly exhales a violet scent, in which, as well as in colour, it shows an affinity to *Byssus Iolithus* of Linnæus, and indeed to our *B. purpurea*, *v.* 3. *t.* 192.

1307



May 1 1804 Publish'd by J. [illegible]

37.

FUCUS sarniensis.

Guernsey Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond somewhat cartilaginous, flat, nerveless, palmate, wavy, proliferous at the edges: segments linear. Tubercles spherical, immersed.

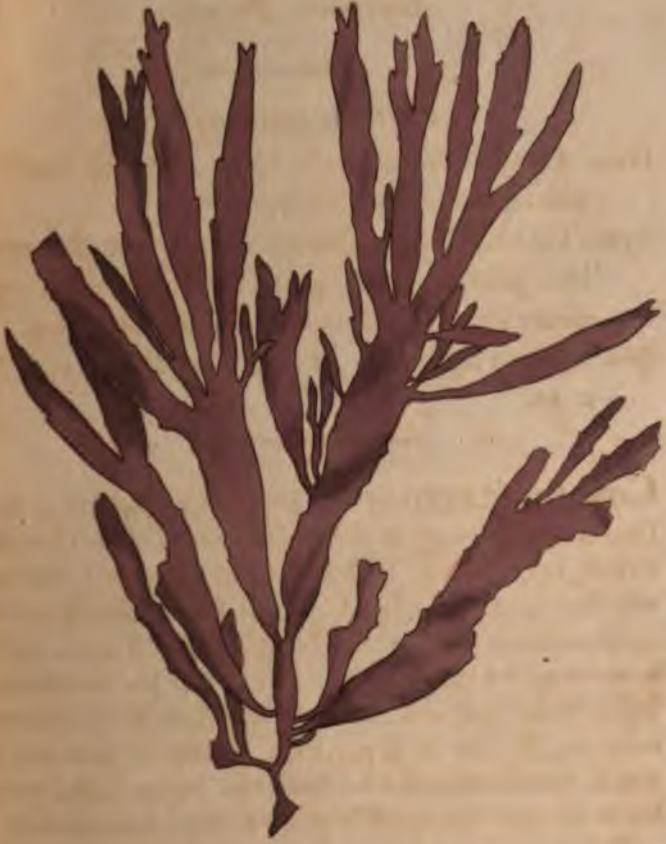
SYN. Fucus sarniensis. *Turn. Hist. Fucor. v.* 1. 95. *t.* 44.

COMMUNICATED by Mr. Turner, who received it from Dublin bay, by means of the late Dr. Scott. It has been described in the 3d vol. of Roth's *Catalecta* by Prof. Mertens, who having obtained his specimens from Guernsey gave it the above name; and to that able writer, Mr. Turner, as well as ourselves, are indebted for all we know of the fructification, which he describes and figures as roündish black immersed tubercles, the size of poppy seed. Mutilated specimens, it seems, have heretofore been found cast on the British coasts, but in too imperfect a condition for accurate determination.

The colour is purplish, very fugitive; brownish in a dry state. Its general habit approaches to *F. palmatus, t.* 1306, but the whole form is still more truly palmate, the segments more linear, and wavy, with an appearance of shallow unequal teeth here and there at the edges, in which part also they are often proliferous. The extremities are either acute, jagged, or abrupt; the base tapering and narrow, proceeding from a small callous disk. The substance of the frond is minutely dotted, but not at all reticulated.

Mr. Turner observes that the frond easily splits into two membranes, and is occasionally found perforated here and there with small oblong holes.

2132.



Published by J. Sowerby London

38.

[2133]

FUCUS soboliferus.

Many-branched Red Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

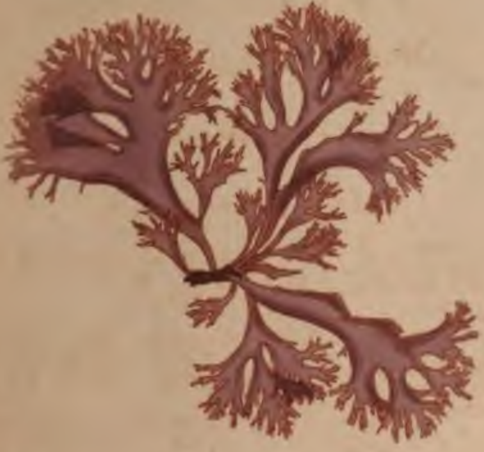
Spec. Char. Frond membranous, flat, nerveless, repeatedly palmate, laciniated, finely reticulated: segments dilated upwards, toothed at the extremity.

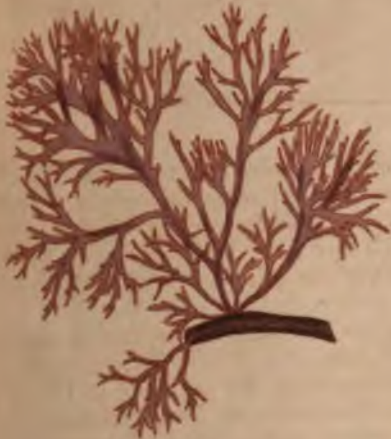
Syn. Fucus soboliferus. *Fl. Dan. t.* 1065. *Turn. Hist. Fucor. v.* 1. 97. *t.* 45.

OUR broadest specimen, gathered by the late Rev. Dr. Walker in the Mull of Galway, was communicated by Mr. Turner; that with narrower segments was found on the shores of Orkney, growing on other *Fuci*, by Mr. Hooker and Mr. Borrer, who observed the same upon rocks in Great Loch Broom, Ross-shire.

Mr. Turner considers this as a plant of very rare occurrence, as well as of a doubtful genus, no fructification being as yet known, and the habit approaching full as nearly to *Ulva* as to *Fucus*. For the present however our learned friend follows Prof. Vahl in its arrangement, and we not only consider ourselves safe under his auspices, but we think the analogy of *F. sarniensis, t.* 2132, greatly confirms his determination. The present however is a far more membranous and delicate species, beautifully reticulated under a microscope, repeatedly and finely palmate, jagged and subdivided, the segments dilated upwards, or wedge-shaped, cut or toothed at their extremities. The stalk or base of the whole is slender and round, but soon becomes flattened. The colour is a fine pink or pale purple, turning yellow or whitish in decay.

It is necessary to remark that tab. 1065 and 1066 of the *Flora Danica* are wrong numbered. Our reference accords with the letter-press.





Apl 1 1810 published by Js Sowerby London

39.

FUCUS punctatus.

Dotted Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

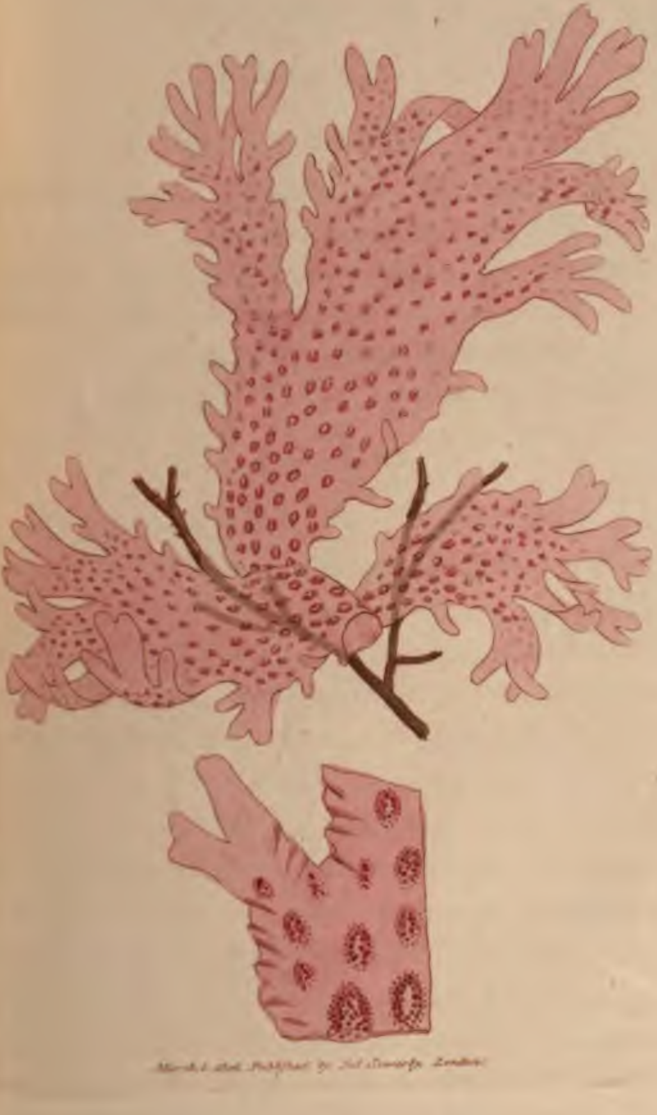
SPEC. CHAR. Frond membranous, palmate, dichotomous, smooth: its segments obtuse. Fruit in scattered oblong patches.

SYN. Fucus punctatus. *With. v. 4. 405.*
Ulva punctata. *Stackh. Tr. of Linn. Soc. v. 3. 236.* *Hull.* 313.

WE have no hesitation in referring this beautiful sea-weed to *Fucus* rather than *Ulva*. Our much respected friend Mr. Stackhouse has candidly expressed his doubts on this point, or we should be much more cautious of going counter to his opinion. We have been more fortunate than that gentleman in the freshness of our specimens, gathered on the coast at Larne, Ireland, by Mr. Drummond, which show the true colour to be a delicate pale pink, with dark red seeds, and that the brown hue, when observable, arises from some degree of decay.

The root is affixed to some other marine vegetable. Fronds uniformly very thin and membranous, without rib or veins, palmate; the segments repeatedly forked, linear and obtuse; the margin growing waved with age. Seeds in elliptic-oblong, rather prominent, tubercles, half immersed in the frond, and scattered over all the broadest part of it.

1573



March 1 1806 Publish'd by Jas. Sowerby London

FUCUS ulvoides.

Laver-like Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

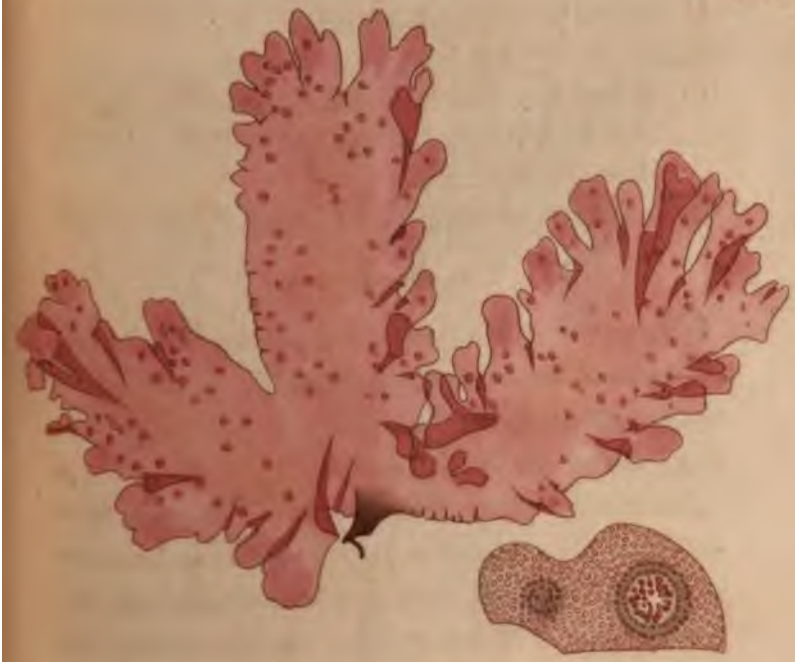
SPEC. CHAR. Frond membranous, thin, nerveless, lobed: lobes obtuse, pinnatifid, entire. Tubercles hemispherical, immersed, scattered.

SYN. Fucus ulvoides. *Turn. Hist. Fucor. v.* 2. 22. *t.* 80.

GATHERED by Miss Hutchins in Bantry bay, Ireland, and communicated to us by Mr. Turner, who alone has published any account of this plant.

Its affinity to *Fucus punctatus, t.* 1573, is too striking to be overlooked. Mr. Turner considers it as allied also to *laceratus, t.* 1067, being of an intermediate texture between the two. Its reticulated structure agrees with that of the former, not expressed in our *t.* 1573. The chief distinction seems to reside in the tubercles, which in *F. ulvoides* are enclosed in a membranous integument, round, very prominent, with a small central point. When however we consider how various in appearance the fructification of the very same *Fucus* is often found, we cannot but feel rather dissatisfied on the subject, and we submit the matter to the public, chiefly out of deference to the experience and judgment of the lady who discovered this elegant sea-weed, and of Mr. Turner, who is rather inclined to support her opinion.

2134



published by J. Sowerby London

[2116]

FUCUS reniformis.

Kidney-shaped Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

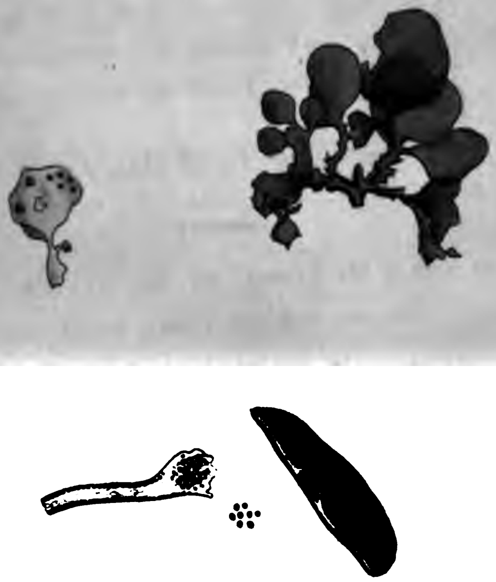
Spec. Char. Stalk cylindrical, short, branched. Fronds kidney-shaped or orbicular, flat, entire, cartilaginous, nerveless, crimson. Tubercles scattered, superficial, hemispherical.

Syn. Fucus reniformis. *Turn. Hist. Fucor. v.* 2. 109. *t.* 115.

We, as well as Mr. Turner, are obliged to Miss Everet for specimens of this new and rare *Fucus*, found cast upon the beach at Niton in the isle of Wight. Mr. Borrer found a single plant on the Brighton beach.

The round or kidney-shaped figure of the leaf, and its small size, at once distinguish it. Several such leaves grow usually on one short thick irregularly-divided stalk, from whose summit each leaf suddenly expands, without rib or veins. The substance is firm and rigid; the colour crimson, rendered more or less dull by age or accident. Fructification rather rare, in small convex tubercles, bursting from the surface in a dispersed manner. Mr. Turner observes that the old fronds are sometimes proliferous from their edges; that the plant has a faint smell of violets when moistened, and in drying does not adhere to paper.——It is best fastened with nearly cool glue.

2116



[illegible] Published by J^s. Sowerby London.

42.

[1331]

FUCUS Phyllitis.

Hart's-tongue Fucus.

CRYPTOGAMIA Algæ.

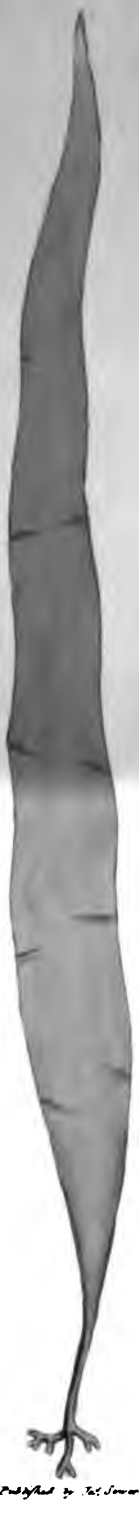
Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Frond membranous, very thin, simple, linear-lanceolate, entire, without a rib. Stalk short and compressed.

Syn. Fucus phyllitis. *Stackh. t.* 9. *Turn. Syn.* 198. *With. v.* 4. 100. *Hull.* 329.
F. saccharinus β. *Lightf.* 941.
F. phyllitidis folio. *Dill. in Raii Syn.* 40.

Mr. Turner has favoured us with specimens of this hitherto very obscure species from Yarmouth. We are therefore certain of its being what he intended, and we cannot feel much doubt of the synonyms of Dillenius and Lightfoot.

It is found growing on the stems of larger plants of the same genus cast up on the beach, but not frequently. The root consists of a few short, soft, compressed, fleshy fibres. Stalk scarcely an inch long, compressed and soft. Frond linear-lanceolate, tapering at each end, flat, entire, a little waved, about a foot long, of a delicate light green, without rib or veins, very thin and membranous; in which circumstance it differs so much from all the varieties and different states of *F. saccharinus* as to seem well entitled to be ranked as a distinct species. The fructification has not yet been observed.



[illegible] 1 1804. Published by Jas. Sowerby, London

3 -

FUCUS saccharinus.

Sweet Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond leathery, simple, sword-shaped, without a rib. Stalk round, rigid.

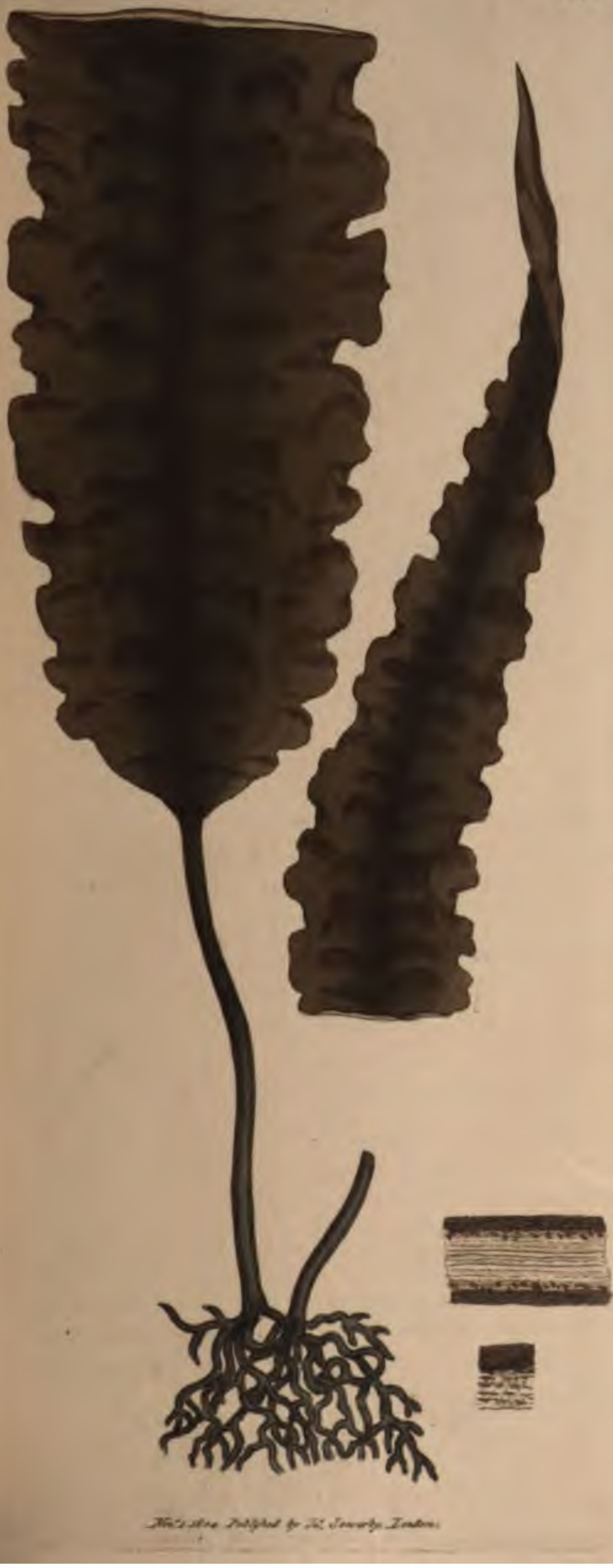
SYN. Fucus saccharinus. *Linn. Sp. Pl.* 1630. *Gooden. and Woodw. Tr. of Linn. Soc.* v. 3. 151. *Turn. Syn.* 198. *Huds.* 578. *With.* v. 4. 96. *Hull.* 320. *Lightf.* 940.

F. folio singulari, longissimo, lato, in medio rugoso, qui balteiformis dici potest. *Raii Syn.* 39, with the 3 following varieties.

FREQUENT on all our seacoasts. The root is perennial, formed of a cluster of intricate branched rigid fibres, adhering to shells or stones. Frond solitary, often 5 or 6 feet long, lanceolate or sword-shaped, simple, leathery, ribless, of a dark olive green, rounded at the base, where it unites with the round tough stalk. The margin is undulated, and in some cases sinuated. In old plants the central part is clouded with dark brown, as in our figure. When cut across, a speckled appearance is visible in the internal substance; but we dare not call it the seeds. If so, the plant should be esteemed an *Ulva*. Sometimes the whole frond is blistered like a luxuriant cabbage-leaf, in which state Linnæus described it by the name of *Ulva latissima*. Mr. Turner informs us that this variety is most general on the southern or western coasts, and that Mr. Stackhouse has figured it in his 9th plate, which we have not seen.

When slightly washed from the sea water, and dried in the air, this Fucus becomes covered with a white sweet powdery efflorescence, whence the name is derived. Many curious remarks on this species are contained in Mr. Turner's work.

1876



Nov. 1. 1808 Published by Jas. Sowerby London.

44.

[2274]

FUCUS digitatus.

Fingered Fucus, or Sea Hangers.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond leathery, palmate, with sword-shaped segments, destitute of ribs. Stalk round. Root fibrous.

SYN. Fucus digitatus. *Huds.* 579. *Linn. Mant.* 134. *Gooden. & Woodw. Tr. of Linn. Soc. v.* 3. 152. *Turn. Syn.* 207. *Hist. Fucor. v.* 3. 65. *t.* 162. *With. v.* 4. 98. *Hull.* 320. *Lightf.* 935. *Stackh. Ner.* 5. *t.* 3. *Fl. Dan. t.* 392.
F. hyperboreus. *Gunner. Norveg.* 34. *t.* 3.
F. arboreus polyschides edulis. *Raii Syn.* 46.
F. polyschides. *Ger. em.* 1570.

FOUND on various parts of the British coasts, especially towards the north. It is often thrown up on the shore at Leith in great abundance, and of a very large size, with the stalk even six feet long, and an inch in diameter.

The root consists of many thick clasping fibres. Stalk simple, various in length and thickness. Frond more or less deeply and copiously palmate or fingered, without rib or vein, leathery, olive brown, rounded at the base; its segments taper-pointed, entire, flat, sometimes subdivided. Fruit first discovered by Mr. Borrer at Brighthelmston, along with that of *F. saccharinus, t.* 1376, both which bear a strong analogy to those of *F. esculentus, t.* 1759, and *bulbosus, t.* 1760. We cannot thence deduce any characters to refute or to confirm Mr. Turner's suspicion that the present plant is not specifically distinct from *saccharinus*, except that the fruit of the latter, represented in our present plate at *f.* 2, is rather the largest, but this might be owing to its more advanced state.

This Fucus serves for manure, and for the manufactory kelp, like many other species.

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FUCUS bulbosus.

Great Furbelowed Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Frond palmate, ribless; its segments sword-shaped. Stalk flat, with a dilated, folded undulated border, lodging the fructification.

Syn. Fucus bulbosus. *Huds.* 579. *Gooden. and Woodw. Tr. of L. Soc. v.* 3. 153. *Turn. Syn.* 212. *Hull.* 320.
F. polyschides. *Lightf.* 936. *With. v.* 4. 97. *Stackh. Ner.* 6. *t.* 4.
F. palmatus. *Gmel. Fuci,* 202. *t.* 30.

Sent from Scotland by Mr. Brodie, along with *F. esculentus*, and the same highly interesting discovery of the fructification has been made by Mr. J. D. Sowerby, in this species as in that.

This is the largest of the British *Fuci*, being sometimes as [redacted]

[illegible]

[illegible] *pedicellis* [illegible]

[illegible]

Mr. [illegible] [illegible] Islands. The plant is [illegible] and has long been [illegible] England, [illegible] The [illegible] of [illegible] [illegible]

The [illegible]

46.

FUCUS rubens.

Red proliferous Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

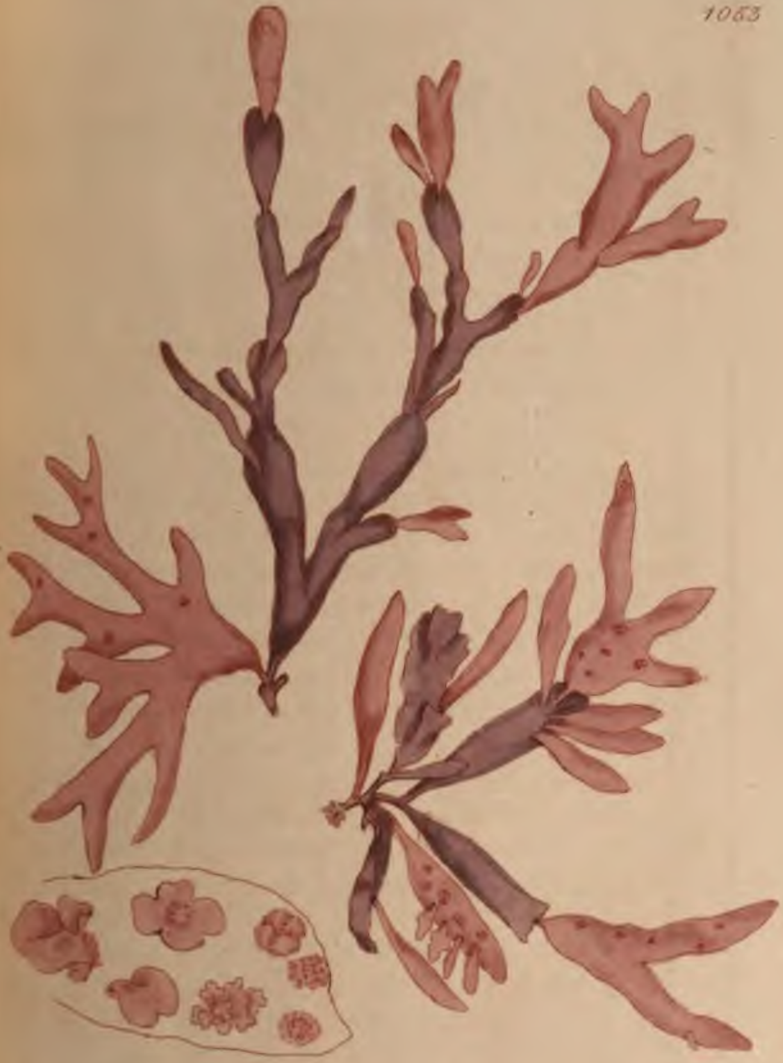
Spec. Char. Frond rather membranous, forked; its branches proliferous, the ultimate ones dilated and cloven, with ſharpiſh points.

Syn. Fucus rubens. *Linn. Sp. Pl.* 1630. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 165. *Hull.* 321.
F. criſpus. *Hudſ.* 580.
F. prolifer. *Lightf.* 949. *t.* 30. *With. v.* 4. 105.
F. membranaceus purpureus, variè ramoſus. *Dill. in Raii Syn.* 47.

MR. D. TURNER favoured us with this ſpecimen from Yarmouth beach. The plant is not uncommon on the Britiſh coaſts, and has long been known by the name of *criſpus* in England, and of *prolifer* by thoſe more verſed in the *Flora Scotica*. The herbarium of Linnæus has at length proved it to be his *rubens*, a name we are therefore obliged to retain, though that of Lightfoot muſt be acknowledged the beſt, and his deſcription and figure deſerve no leſs commendation.

The frond is uniformly red, membranous or ſomewhat cartilaginous and tough, branched at the baſe, remarkably and repeatedly proliferous upward, the branches or joints ſpringing (as Lightfoot well obſerves) from the ſurface, not from the edge or point, of the preceding ones; the branches are rather elliptical than linear, entire at their edges; the ultimate ones forked or palmate, ending more or leſs acutely. Old fronds are mentioned in the Linnæan Tranſactions as having ſometimes a rib or nerve. Cluſters of apparent fructification are ſcattered over the frond, from which innumerable young plants ſprout forth, but whether from ſeeds or buds no one has yet clearly determined.

1053



Augt. 1 1802 Publiſhed by Jas. Sowerby, London.

[No. [illegible]]

F U C U S [illegible]

[illegible]

CRYPTOGAMIA *Algæ.*

Gen. Char. [illegible]

Spec. Char. [illegible]

Syn. *Fucus* [illegible]

F. [illegible]

[illegible]

47.

FUCUS norvegicus.

Red Norway Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

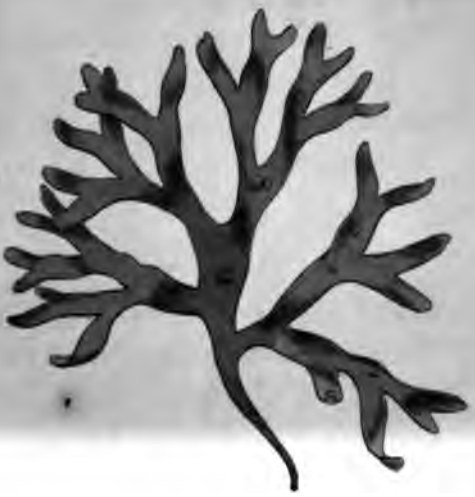
Spec. Char. Frond cartilaginous, forked; its branches linear, entire, rounded at the ſummit. Tubercles hemiſpherical, ſituated on the diſk of the leaf.

Syn. Fucus norvegicus. *Turn. Syn.* 222.
F. crenulatus β. *Turn. Tr. of Linn. Soc. v.* 6. 131.

Specimens of this Fucus were communicated to us in March laſt by Mr. Turner, who received it from Mr. Dillwyn, its original diſcoverer at Dover. At firſt it was ſuppoſed a variety of *crenulatus*, a new ſpecies deſcribed by the firſt-mentioned gentleman in the *Linn. Tranſ.*; but he has now admitted it to the rank of a ſpecies in his *Synopſis*, and ſurely with the greateſt propriety. We have not at hand the figure of Gunner, *Fl. Norv. v.* 2. *t.* 3. *f.* 4. but have no doubt of its being cited with propriety.

F. norvegicus bears a conſiderable reſemblance to *F. criſpus*, (till lately taken by Britiſh botaniſts for the *ceranoides* of Linn.) particularly in its cartilaginous ſubſtance, and in its forked figure; it is alſo, as Mr. Turner obſerves, akin to *rubens*, ſee our *t.* 1053, but is never proliferous, neither is it of ſo membranous a texture, or of ſo pale a colour. The fructification moreover eſſentially diſtinguiſhes it from both, conſiſting of red hemiſpherical tubercles, projecting from the diſk of the frond, by no means immerſed in its ſubſtance. Theſe tubercles contain numerous ſeeds, encloſed in a thick coat.

1080



Octr. 1. 1802 Publiſhed by Jas. Sowerby. London

[999]

RUBUS caesius.

Dewberry.

[illegible]

[illegible]

[2285]

FUCUS crispus.

Crisped Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond cartilaginous, purplish, repeatedly forked, corymbose, crisped and wavy; its segments dilated and spreading. Tubercles scattered, immersed, convex on one side of the frond, somewhat concave at the other.

SYN. Fucus crispus. *Linn. Mant.* 134. *Gooden. & Woodw. Tr. of Linn. Soc. v.* 3. 169. *Turn. Syn.* 226. *With. v.* 4. 106. *Hull.* 322.

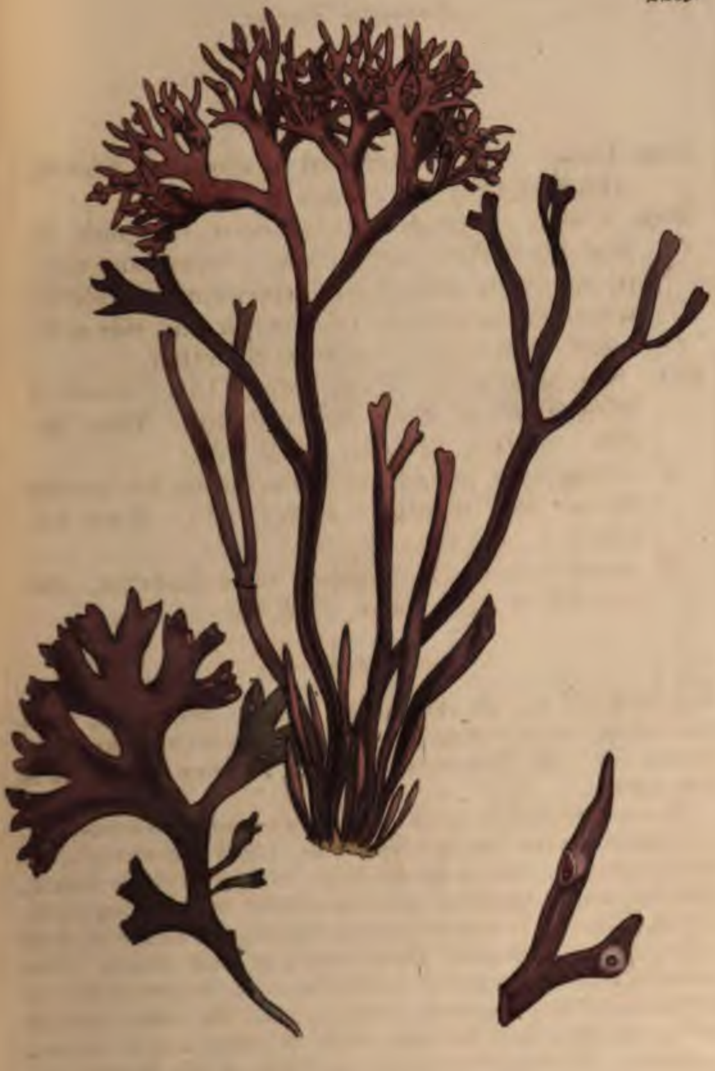
F. ceranoides. *Huds.* 582, excluding his varieties *lacerus* and *inflatus*. *Lightf.* 913. *Gmel. Fuc.* 115. *t.* 7. *f.* 1—3.

F. membranaceus ceranoides, variè dissectus. *Raii Syn.* 44. *n.* 16; also *n.* 17 & 18.

COMMON on all the British coasts. Perennial, as is evinced by the shooting stems in our figure that have been broken off. Mr. Turner marks from October to May as its best season.

The radical disk is small. Fronds numerous, dull purplish, cartilaginous, flat and veinless, from 1 to 4 inches high, dilated variously, from a slender base, into a repeatedly forked, clustered and corymbose head of twisted or wavy segments, greatly differing in breadth and acuteness, all entire at their edges, though notched, when broad, at their points. The tubercles are orbicular or somewhat oval, immersed in the substance of the segments, very convex, and often umbilicated, on one side of the leaf, while the other is more or less concave. We have not room to define all the Proteus-like variations in the height, breadth, or subdivision of the frond, nor to quote their various synonyms, which the curious will find indicated in Mr. Turner's *Synopsis*, and still further perhaps explained when this species appears in his *Historia Fucorum*.

2285.



May 1 1811 published by Jas. Sowerby London

FUCUS mammilloſus.
Mammillary Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

Spec. Char. Frond cartilaginous, forked, dilated upwards, ſharp-pointed, clothed on both ſides with numerous mammillary fruit-bearing tubercles.

Syn. Fucus mammilloſus. *Gooden. and Woodw. in Tr. of Linn. Soc. v.* 3. 174. *Hull.* 323.

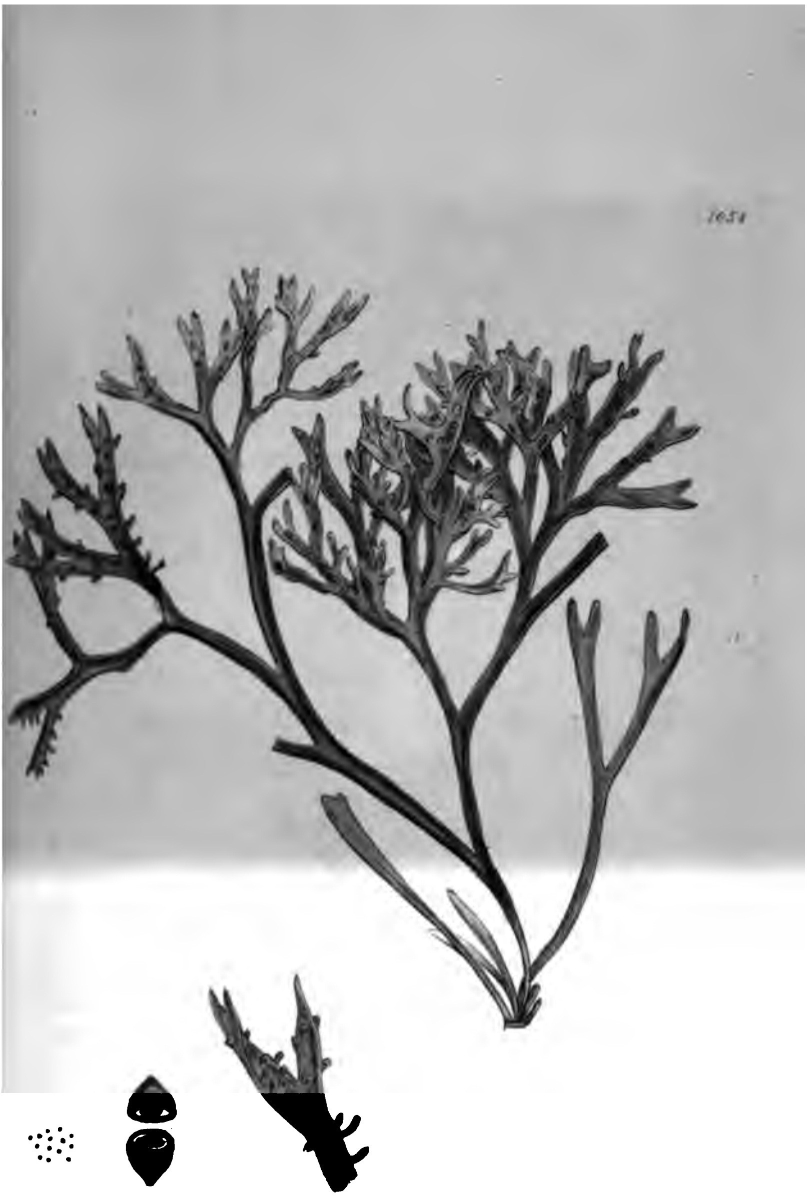
F. canaliculatus β. *Hudſ.* 583.

F. ceranoides. *With.* 99. *Lightf.* 916, *ε.*

F. parvus, cauliculis teretibus, ſummitatibus membranaceis dilatatis et laceratis. *Raii Syn.* 44.

FREQUENT on the coaſt. We received it from Yarmouth with the laſt. No ſpecies has been leſs underſtood, and yet, as we conceive, none is more certain. Moriſon's expreſſive figure, *Sect.* 15. *t.* 8. *f.* 13, having been moſt unaccountably referred by Linnæus, with ſome commendation, to his *F. ceranoides*, though ſcarcely any other 2 Fuci are more different, cauſed this and the true Linnæan *criſpus* (of which it was ſuppoſed a variety) to be univerſally taken for *ceranoides*. Mr. Hudſon in his 2d edition has removed our *mammilloſus* to the *canaliculatus*, a ſpecies totally diſtinct from it in colour, habit, and moſt eſpecially in fructification, ſee our *v.* 12. *t.* 823.——The *Fucus* before us can be confounded with no other, if attention be paid to the ſingular mammillary tubercles which cover both ſides of its uppermoſt ramifications, each of which contains a cluſter of dark-red ſeeds. In habit and colour, varying from red, or pale purple, to a pale greeniſh brown, it agrees with *criſpus*, but is more channelled, and generally ſharper pointed. It is ſometimes found much narrower than is here repreſented.

1051



Aug^t 1. 1802 Publiſhed by Ja^s Sowerby London

50·

FUCUS canaliculatus.

Channelled Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

Spec. Char. Frond dichotomous, linear, channelled on one ſide, entire, nerveleſs, with blunt, forked, ſwelling, fruit-bearing tips.

Syn. Fucus canaliculatus. *Linn. Syſt. Nat. ed.* 12. *v.* 2. 716. *Hudſ.* 583. *With. v.* 4. 99. *Hull.* 322. *Gooden. and Woodw. in Linn. Tranſ. v.* 3. 172.

F. exciſus. *Linn. Sp. Pl.* 1627. *Syſt. Nat. ed.* 12. 715. *Fl. Dan. t.* 214.

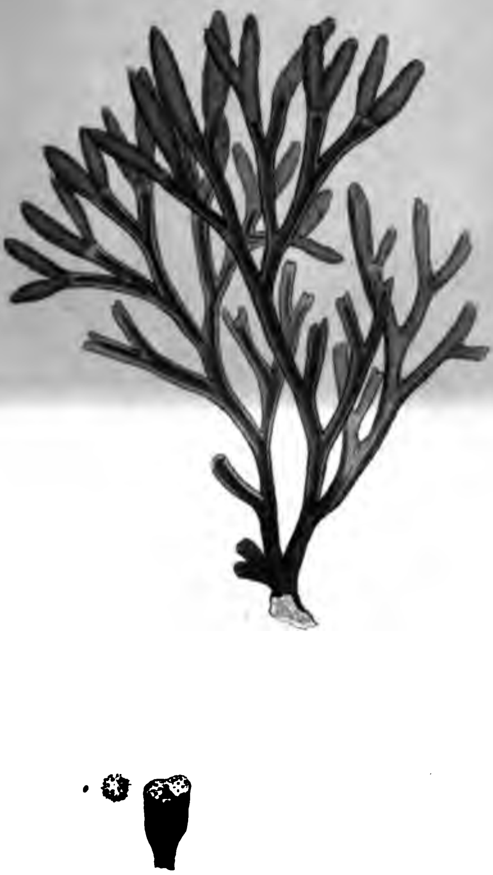
F. pumilus dichotomus, ſegmentis ex unâ parte gibboſis, ex alterâ excavatis. *Raii Syn.* 43.

NOT uncommon on ſubmarine rocks in various parts of the Britiſh coaſt; ſometimes about the mouths of large rivers.

It is known by its fronds being channelled or concave on one ſide, convex on the other, of an olive brown, branched from the very bottom in a forked manner, entire and even at the edge, notched at the tip when barren. The fructification is ſituated in ſwelling, forked or twin, rugged, oblong, terminal protuberances, of a paler and more yellowiſh olive than the reſt of the plant, ſtudded with cluſters of ſeeds.

Linnæus was not aware, when he wrote the 12th edition of his *Syſtema Naturæ*, that this Fucus was the *exciſus* of *Sp. Pl.* conſequently it occurs twice in the firſt-mentioned book. He afterwards in ſome meaſure corrected the error, by making *exciſus* a variety of *canaliculatus*; but in truth they are one and the ſame plant.

823



Publiſhed Jan.y 1 1801 by Ja.s Sowerby London

51.

FUCUS loreus.

Thong Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

Spec. Char. Frond repeatedly forked, compreſſed, acute, ſmooth, ſprinkled with tubercles on each ſide.

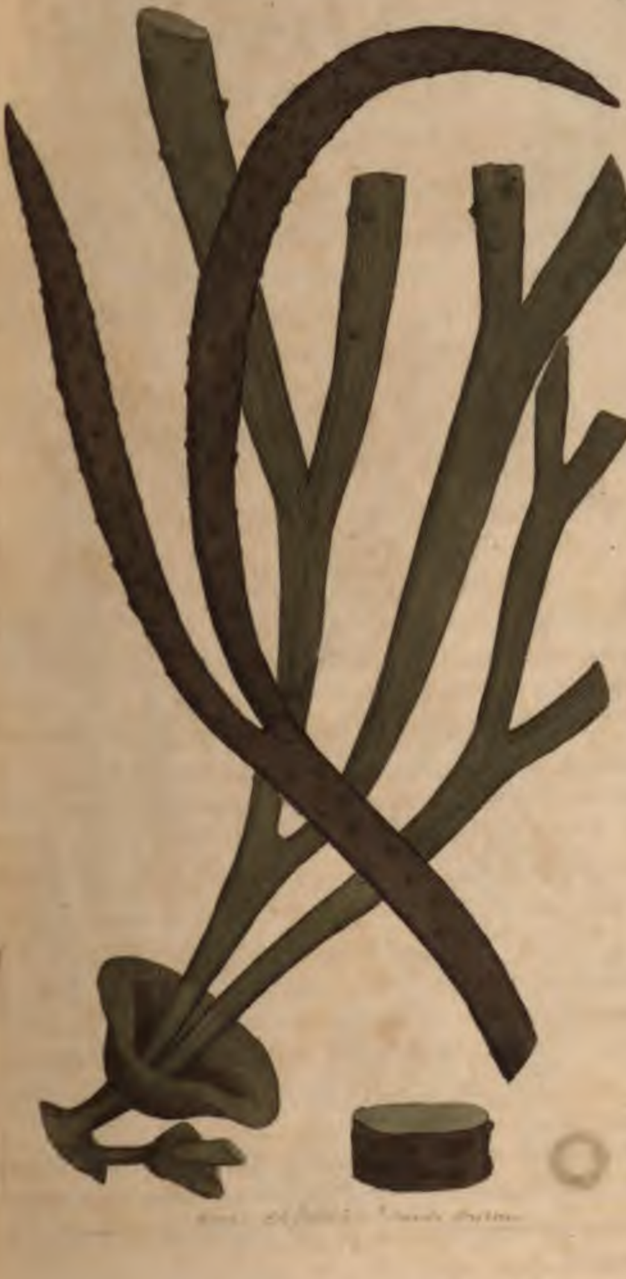
Syn. Fucus loreus. *Linn. Syſt. Veg. Ed.* 14. 968. *Hudſ.* 583. *With.* v. 4. 96. *Gooden. & Woodw. Tr. of Linn. Soc.* v. 3. 176.
F. elongatus. *Linn. Sp. Pl.* 1627.
F. longo anguſto craſſoque folio. *Raii Syn.* 43.
F. fungis affinis. *Raii Syn.* 43, in a young ſtate.

THIS Fucus is found growing upon ſubmarine rocks on the ſouth coaſt of England, and is thrown upon the Yarmouth beach by very ſtrong eaſterly winds only, in the winter months, during which it is in fruit. Hence Mr. D. Turner, from whom we received ſpecimens, juſtly concludes it not to be really a native of our Norfolk ſhores, more eſpecially as F. *ovalis* and *articulatus* are found attached to its root, which are never ſeen at Yarmouth otherwiſe.

The frond grows to the length of 2 or 3 yards or more, and very much reſembles a leather thong, except in being repeatedly dichotomous. Tubercles of ſeeds are ſcattered over it on both ſides. The moſt eſſential diſtinction of the ſpecies conſiſts in a dilated cup (like ſome kinds of *Peziza*) which is firſt formed, and from the centre of which the fronds grow out, either ſolitary or in pairs. This is ſufficiently expreſſed in our figure. A variety mentioned in the *Linn. Tranſ.* is ſmaller, generally narrower, leſs branched, and the angles of the branches are more obtuſe.

Mr. Turner obſerves, that “ the frond is in the central part “ pulpy, and full of capillary colourleſs entangled fibres, in- “ viſible without a microſcope. When this plant has been 2 “ or 3 days out of the ſea, a yellow mucus exudes from its “ pores, ſimilar to what Reaumur miſtook for *antheræ* in F. “ *ſerratus* and others. The ſeeds are diſcharged in the ſame “ manner. F. *loreus* is a connecting link between *Fucus* and “ *Ulva*, agreeing greatly in texture as well as fructification “ with U. *diaphana*.”

569.



[illegible]

FUCUS nodosus.

Knobbed Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. Seeds produced in [illegible] tubercles which burst at their summits.

SPEC. CHAR. Frond furrowed [illegible] compressed [illegible] here and there inflated into oval bladders. Fruc[illegible] [illegible] on [illegible] stems.

SYN. Fucus nodosus. *Linn. Sp. Pl.* 1628. *Huds.* [illegible] *With.* [illegible] *Gmelin. Hist.* [illegible] *Engl. Bot.* [illegible]

F. maritimus nodosus. *Raii Syn.* 48.

A VERY common Fucus upon all our rocky coasts, [illegible] washed up by the tide plentifully in the autumn [illegible]

It bears its fructification in December.

FUCUS nodoſus.

Knobbed Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

Spec. Char. Frond ſomewhat forked, compreſſed, here and there inflated into oval bladders. Fructification on obovate leaves.

Syn. Fucus nodoſus. *Linn. Sp. Pl.* 1628. *Hudſ.* 584. *With. v.* 4. 84. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 190.

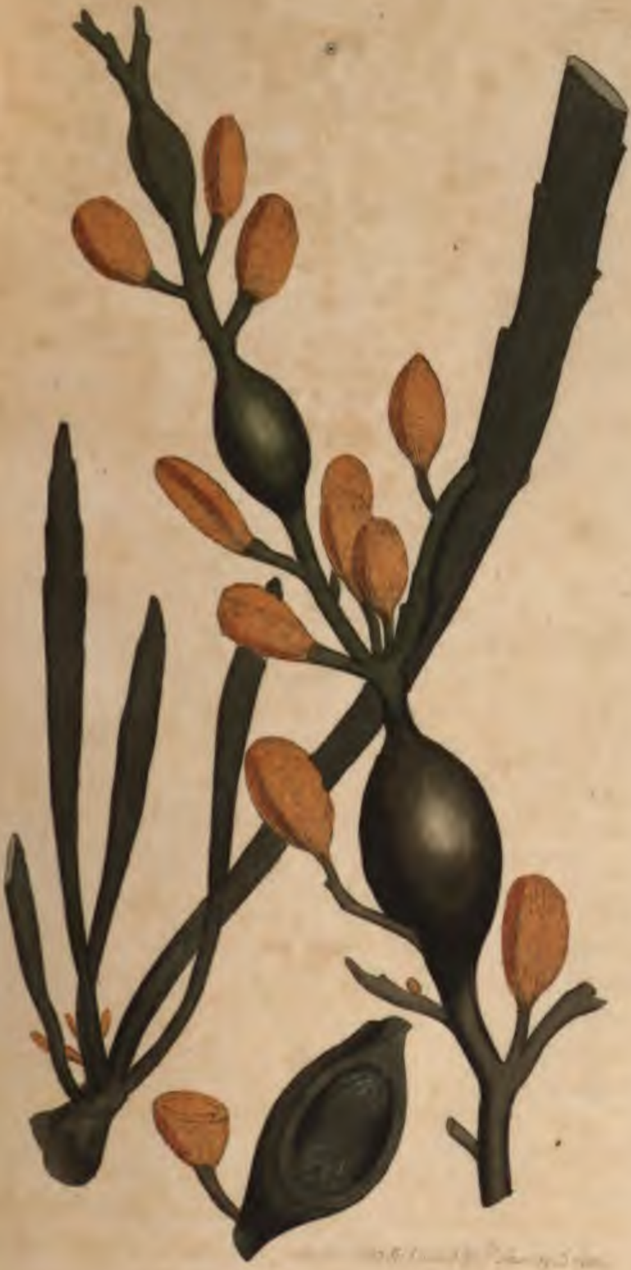
F. maritimus nodoſus. *Raii Syn.* 48.

A VERY common Fucus upon all our coaſts, generally waſhed up by the tide plentifully in the mouths of great rivers. It bears its fructification in December.

The fronds are three or four feet long, flat, leathery, olive-coloured, forked, and when full grown are ſwelled out, at the diſtance of every 2 or 3 inches, into a ſolitary elliptical bladder, full of air, and occupied alſo by a few white ſlender cobweb-like filaments, formed merely of the central pulpy ſubſtance of the plant. Numerous flattiſh obovate pale-olive proceſſes grow out of the edges of the frond, upon footſtalks, in an alternate order, which have been called leaves, not with exact propriety, for they are deſtined chiefly to produce the fructification, with which they are thickly clothed on both ſides. The cluſters of ſeeds, when cut acroſs, are of a full yellow or orange colour.

This ſpecies can be confounded with no other. The oval bladders, which crack with a ſharp report when trodden upon, and the peculiar ſituation of the fructification, both clearly diſtinguiſh it.

570



[illegible]

FUCUS Mackaii.

Mackaian Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles which burst at their summits.

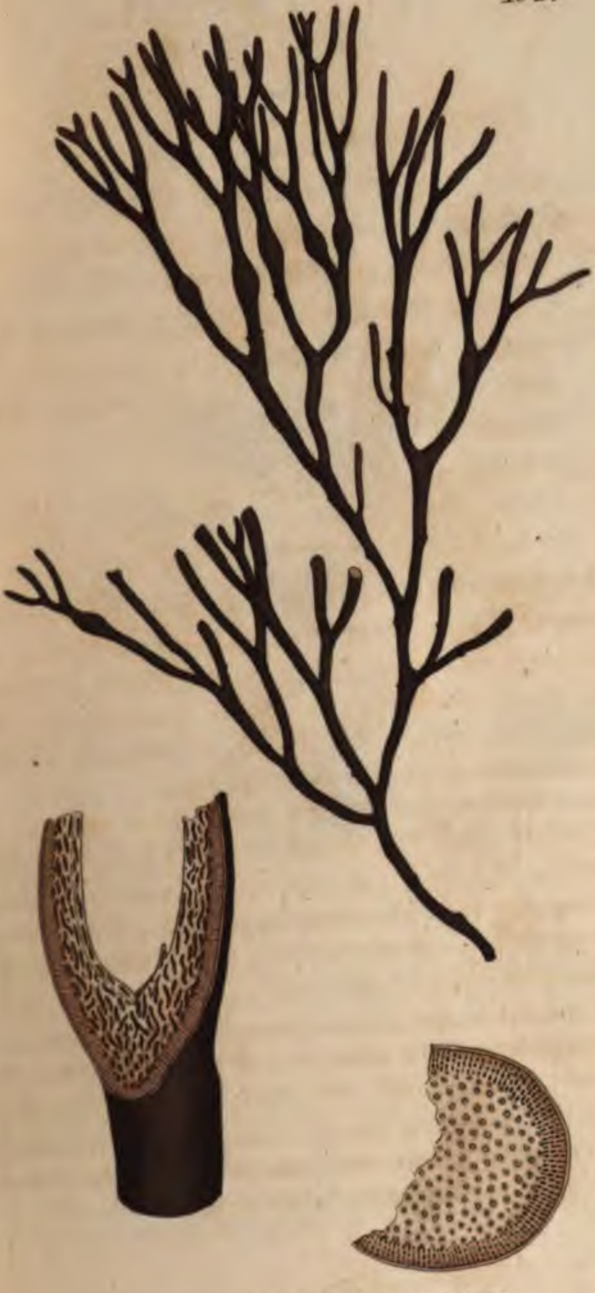
SPEC. CHAR. Frond coriaceous, cylindrical, forked, level-topped, olive-brown; the summits blunt: vesicles scattered, innate, elliptical, wider than the frond.

SYN. Fucus Mackaii. *Turn. Hist. Fucor.* 116. *t.* 52.

DISCOVERED in a sheltered bay at Cunnamara, in the county of Galway, by Mr. James Townshend Mackay, whose many other discoveries relative to the botany of Ireland we have often mentioned, and who is commemorated in the above name, given by Mr. Turner, to whom we are obliged for specimens of this and the foregoing.

Root a callous disk. Frond from 6 to 10 or 12 inches high, leathery, of a dark olive brown, repeatedly forked, cylindrical, except in the lower part, which is somewhat compressed. The angles or forks are a little rounded or patent; the summits paler, blunt and level-topped. Several solitary inflations, or imbedded vesicles, appear here and there towards the upper part, but below the youngest branches, much thicker than the other parts of the frond, and of an elliptical form, being very vascular internally. Mr. Turner presumes from analogy that the fructification, hitherto unknown, may resemble that of *F. nodosus*, *t.* 570, and *canaliculatus*, *t.* 823, to both which the present species is nearly akin.

1927



Septr 1 1808. Published by Jas Sowerby London.

[[illegible]]

FUCUS pygmæus.

Pigmy Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. Seeds produced in elongated tubercles, which burst at their summits.

Spec. Char. Frond cartilaginous, forked, dilated at [illegible] at the top. Tubercles globose, terminal, [illegible] at the extremities.

Syn. Fucus pygmæus. *Lightf. Scot.* [illegible] *Turn. Syn.* 118. [illegible]

F. pumilus. [illegible]

F. lichenoides. *Goodenough & Woodward, Tr. of Lin. Soc.* v. 3. 188. [illegible]

[illegible] *Huds. Fl. Ang.* [illegible]

54.

[1332]

FUCUS pygmæus.

Pigmy Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond cartilaginous, forked, dilated and palmate at the top. Tubercles globose, terminal, perforated at their summits.

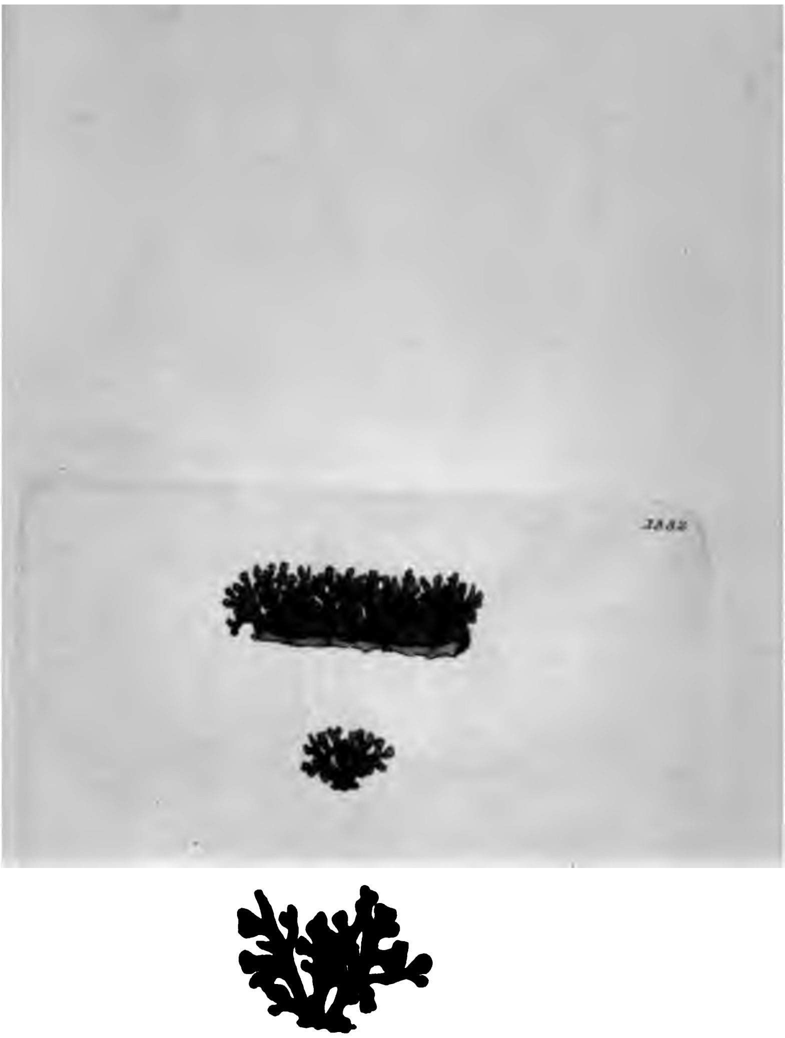
SYN. Fucus pygmæus. *Lightf.* 964. *t.* 32. *Turn. Syn.* 258. *With. v.* 4. 100.

F. pumilus. *Huds.* 584.

F. lichenoides. *Gooden. & Woodw. Tr. of Linn. Soc. v.* 3. 192. *Hull.* 324.

Lichen saxatilis maritimus muscosus minimus nigerrimus. *Mich. Gen.* 103.

GATHERED on the Cornish coast. It is also found in



1382

July 1 1804 Published by Jas Sowerby, London.

55.

FUCUS aculeatus.

Prickly Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Frond cartilaginous, thread-shaped, much branched; branches linear, compressed, bordered with scattered, awlshaped, upright teeth.

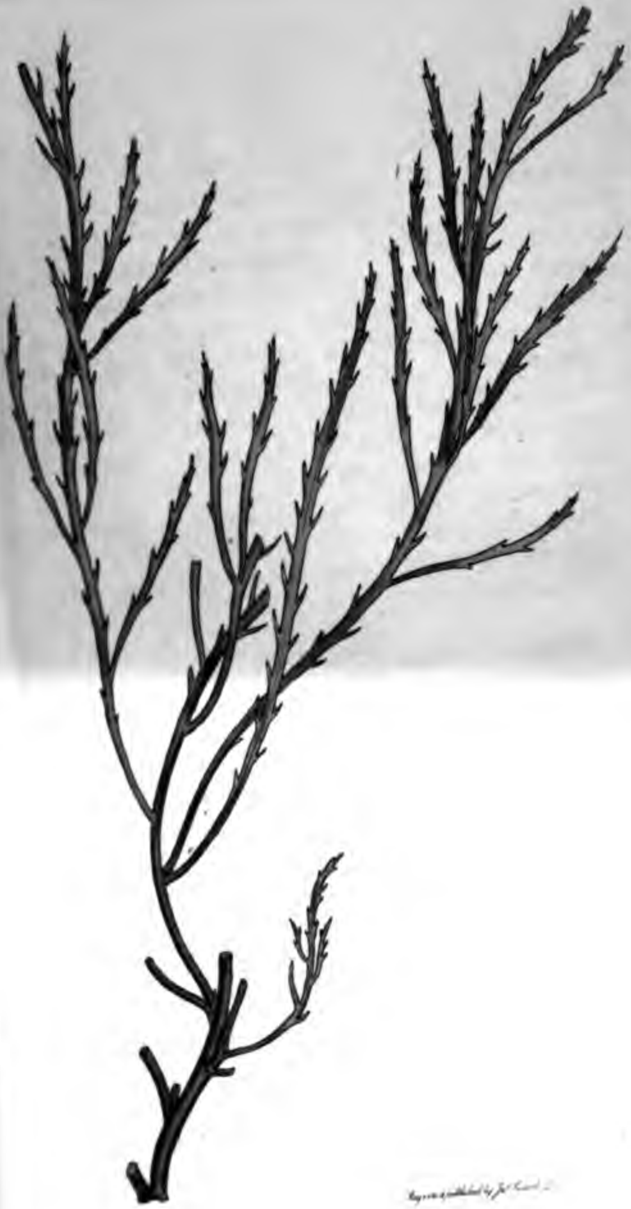
Syn. Fucus aculeatus. *Linn. Sp. Pl.* 1632. *Huds.* 585. *With. v.* 4. 113. *Hull.* 323. *Gooden. & Woodw. Tr. of Linn. Soc. v.* 3. 179. *Turn. Syn.* 262. *Hist. Fucor. v.* 3. 122. *t.* 187. *Stackh. Ner.* 24. *t.* 8. *Lightf.* 924.

F. muscoides. *Linn. Sp. Pl.* 1630? *Huds.* 590? *Gmel.* 130. *t.* 12.

F. angustifolius, foliis dentatis. *Raii Syn.* 48.

NOT unfrequent on the coasts of Britain. The root is a small, callous, perennial disk. Stalk of the frond round, subdivided and cartilaginous; upper part repeatedly and alternately branched, compressed, olive-coloured; the branches linear, very narrow, flat, tapering at the base and summit; their edges fringed with scattered, awlshaped, slightly spreading, soft teeth or bristles. Mr. Turner quotes Mrs. Griffiths and Miss Hutchins, whose discoveries we have so often mentioned, as having detected, in an early state of this plant's growth, little tufts of fine, jointed, compound filaments, resembling a minute *Conferva*, which falling off are succeeded by the above-mentioned teeth; the latter perhaps being the elongated bases, or stalks, of such tufts. Various appearances have been mentioned by different botanists as the fruit of this species, but none ascertained to be so. What the *F. muscoides* of Linnæus really was, we find no original specimen to determine.

2443.



Engraved & published by Jas Sowerby

[[illegible]]

FUCUS pinnatifidus.

Pinnatifid Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. Seeds immersed in scattered tubercles, which burst at their summits.

Spec. Char. Frond cartilaginous, branched; branches mostly alternate, doubly pinnatifid, cut into short blunt callous teeth, which bear the sessile ovate tubercles.

Syn. Fucus pinnatifidus. *Huds.* 581. *Goodenough and Woodward Tr. of Linn. Soc.* v. 3. [illegible]. *Turn. Syn.* [illegible]. *With.* v. 4. [illegible]. *Hull.* [illegible]. *Lightf.* 953. *Stackh. Ner.* [illegible]

F. multifidus. *Huds.* 581.

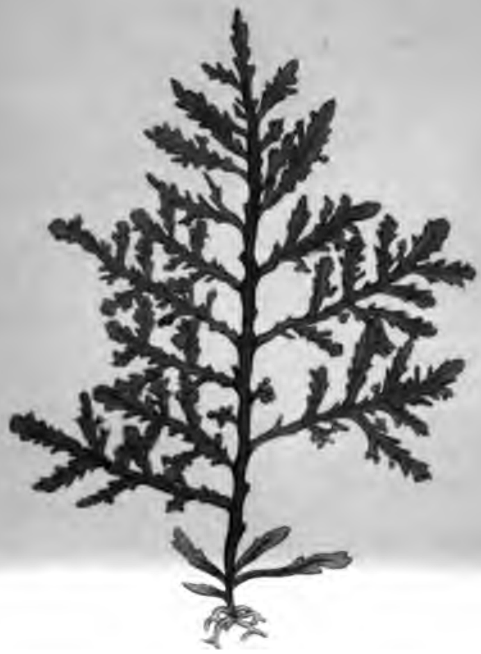
F. filicinus. *Lightf.* 954.

F. Dealensis, Pedicularis rubræ folio. *Dill. in Raii Syn.* 45.

F. ramosus, piperis sapore. *Dill. in Raii Syn.* 51.

THIS is found on various parts of the coast, and known in

1202



Augt 1 1803 Published by Jas Sowerby London

FUCUS corneus.

Horny Pinnate Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tuber
which burst at their summits.

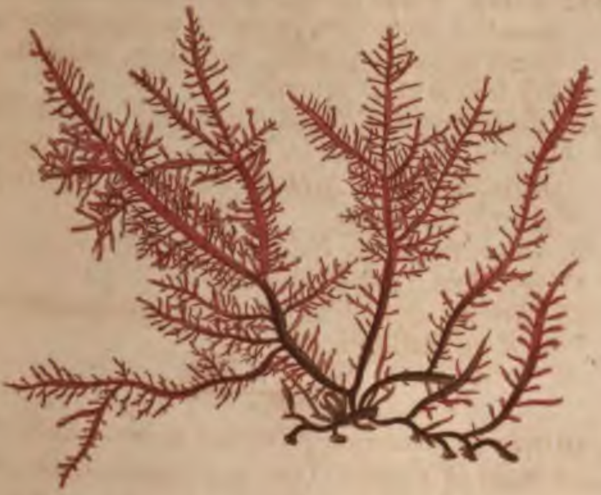
SPEC. CHAR. Frond horny, much-branched, compres
Branches lanceolate, pinnatifid or bipinnatifid ;
ments opposite, parallel, spreading, bluntish, b
ing fruit at their summits.

SYN. Fucus corneus. *Huds.* 585. *Gooden. and Woo*
Tr. of Linn. Soc. v. 3. 181. *Turn. Syn.*
With. v. 4. 117. *Hull.* 323. "*Stackh. Ner.*
t. 12." *Turner.*
F. sericeus. *Gmel. Fuci*, 149. *t.* 15. *f.* 3.
F. nereideus. *Lightf.* 956.
F. flavicans teretifolius, ramulis pennatim enascentibu
Dill. in Raii Syn. 50.

FOUND on submarine rocks and stones, chiefly on the south coasts of England. Our larger specimen was gathered in the isle of Wight by Miss Everett; the smaller, which seems Mr. Stackhouse's *F. pusillus*, *Ner.* 16. *t.* 6, Mr. Borrer found at Brighthelmston. Lightfoot says this species is met with "in the Frith of Forth, and other places, but not common." It is said to bear fruit in the summer.

The fronds form entangled tufts, of a light red or tawny hue, with a waxy transparency, and when dry a horny elasticity. They are repeatedly branched, the branches lanceolate, very regularly, and more or less deeply, pinnatifid or pectinate, sometimes simply, often doubly or triply, hence the various species of authors which can hardly be defined as varieties, comprehending the *pinnatus* and *filicinus* of Hudson, 586, the *spinosus* of Gmelin, *t.* 18. *f.* 3, and, as Mr. Turner suspects, his *capillaceus*, *t.* 15. *f.* 1. With this last we are unacquainted. The seeds of *F. corneus* are lodged in the tumid oval extremities of the lateral segments.

1970



[illegible] Published by Jas Sowerby London.

58.

FUCUS gigartinus.

Grape-ſeed Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

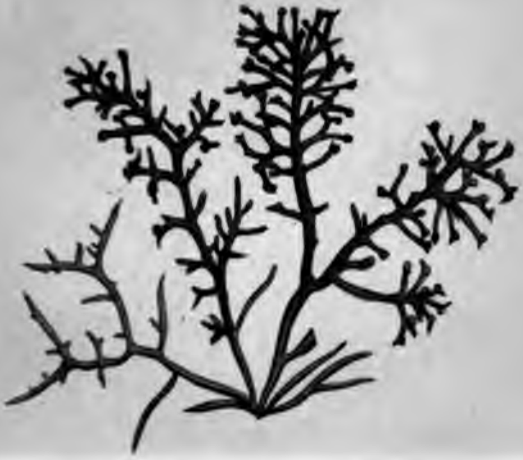
SPEC. CHAR. Frond cartilaginous, forked, branched; branches linear, pointed, ſet with ſpinous teeth. Fruit globoſe, lateral, ſeſſile.

SYN. Fucus gigartinus. *Linn. Syſt. Veg. ed.* 13. 816.
Gooden. and Woodw. Tr. of Linn. Soc. v. 3. 183.
With. v. 4. 111. *Hull.* 323.
F. piſtillatus. *Gmel. Fuci* 159. *t.* 18. *f.* 1.

THE late excellent Dr. Wenman of All Souls College, Oxford, was the original finder of this rare Fucus on the Corniſh coaſt; for the other ſpecimens alluded to in the Linnean Tranſactions were gathered by Loefling at St. Ubes in Portugal. We are however enabled to confirm Dr. Wenman's diſcovery, by means of one fine ſpecimen found by Dr. Macculloch, growing on a bank of Schiſtus, in Mounts-bay, near Newlyn, Cornwall. It has been ſent to Mr. D. Turner by Profeſſor Mertens of Bremen, under the name of *F. piſtillatus* of Gmelin.

Many fronds grow from one callous baſe, and are various in height from 2 to 5 inches; their ſubſtance is rigid and horny; their colour blackiſh at the baſe, dull-red upwards, paler and often greeniſh at the ſummits. Each frond is linear, flattiſh, forked, and variouſly branched, ending in taper points, and furniſhed in the upper part chiefly with ſpinous teeth, the rudiments of branches. The fructification is ſtriking and characteriſtic, conſiſting of dark-red ſeſſile lateral globules, containing a cluſter of ſeeds, which at length come forth at a terminal orifice.

908



Augt 1 1801 Published by Jas Sowerby. London.

FUCUS cartilagineus.

Cartilaginous Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

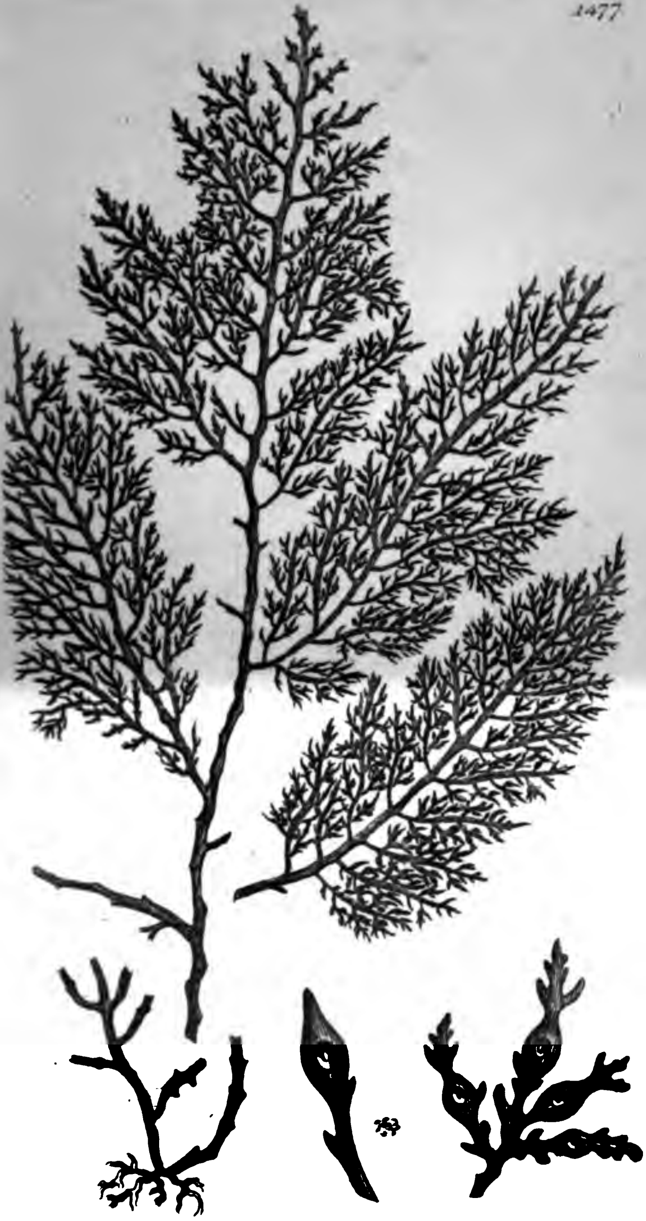
Spec. Char. Frond cartilaginous, repeatedly pinnate, with a naked stalk: the subdivisions alternate, compressed, nearly linear; the ultimate ones short, obtuse, bearing the fruit.

Syn. Fucus cartilagineus. *Linn. Syst. Veg. ed.* 13. 816. *Turn. Syn.* 288. *Gunn. Norv. v.* 2. 108. *t.* 5. *f.* 5.
F. capensis. *Gmel. Fuci*, 157. *t.* 17. *f.* 1.
F. versicolor. *Gmel. Fuci*, 158. *t.* 17. *f.* 2.

WE rely on the accuracy of Mr. Turner and Dr. Withering in making this a British species, but it is not the *cartilagineus* of the last-mentioned excellent writer, which was merely adopted from Hudson. He is said to have received the true plant, but a short time before his death, from Fresh-water bay in the Isle of Wight. We have been obliged to delineate a foreign specimen. It is one of those most frequently brought from abroad, and is often encrusted with a Madrepore. It is remarkably horny or cartilaginous, and cannot, by any cement that we know of, be fastened permanently to paper.

The root is small and fibrous. Fronds much and alternately branched, rather naked below, flat and fan-like above: their branches compressed; elongated and bare at the extremities. The ultimate lateral divisions are crowded, short and obtuse, each when fertile bearing an immersed red tubercle, at first terminal, but at length overtopped by a point or little branch. The colour is red, purple, greenish, brown, or tawny; so that Gmelin's name of *versicolor* is much happier than his confused citation of Linnæus under that species.

1477



July 1 1805 Published by Jas Sowerby, London

60

FUCUS coronopifolius.

Buck's-horn Fucus.

CRYPTOGAMIA Algæ.

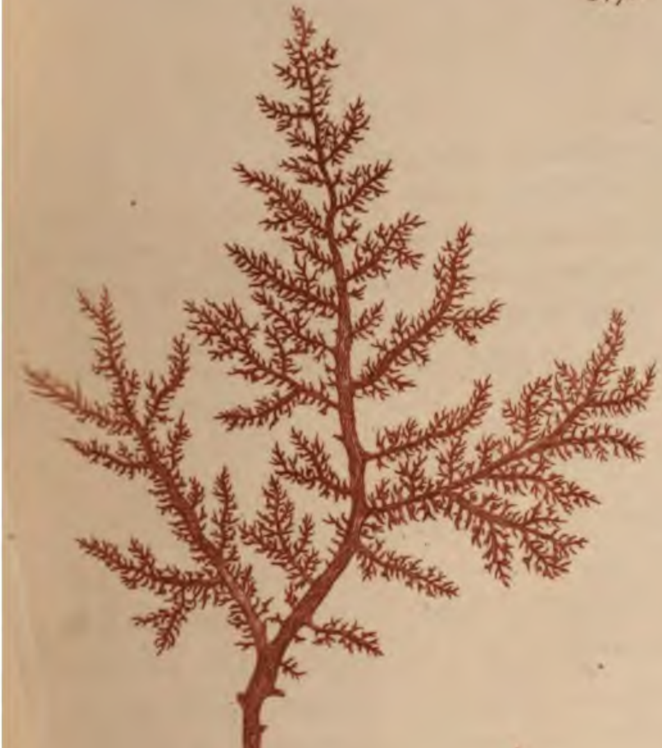
GEN. CHAR. *Seeds* produced in clustered turbercles, which burst at their summits.

SPEC. CHAR. Frond cartilaginous, much branched: the branches much divided, obscurely veined; when barren dilated. Tubercles globular, on short, two-ranked, forked or pointed stalks.

SYN. Fucus coronopifolius. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 185. *Turn. Syn.* 287. *Hull.* 324.
F. cartilagineus. *Huds.* 586. *With. v.* 4. 119.
F. coronopi facie. *Dill. in Raii Syn.* 45. *Herb. Buddl.*

THIS is most certainly a British species, having been found

1478



July 1. 1805 Publish'd by Ja. Sowerby London

FUCUS glandulosus.

Red Glandular Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

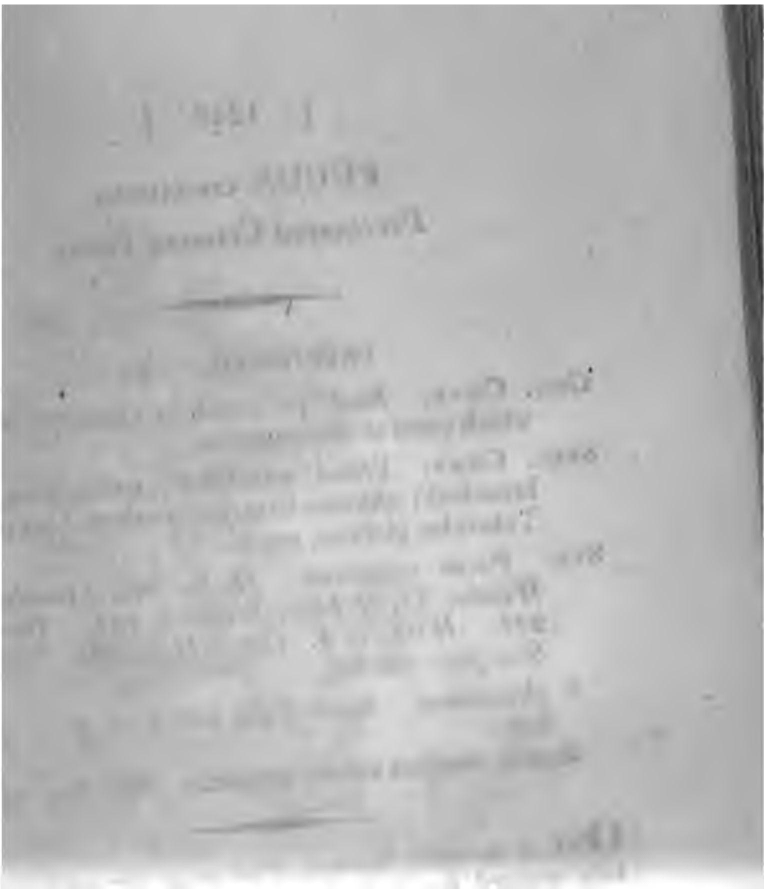
Spec. Char. Frond membranous, compressed, tubular, repeatedly branched, linear, nerveless, reticulated. Seeds in the oblong forked extremities.

Syn. Fucus glandulosus. *Turn. Hist. Fucor. v.* 1. 81. *t.* 38.

For this also we are indebted to our often-mentioned friend Mr. Turner, who favoured us with one of Mrs. Griffiths's original specimens, found cast upon the Devonshire coast. Unfortunately it had no fructification, which has been observed on some specimens by that lady in September, in the form of red grains, imbedded in the oblong, swelling, forked, obtuse points of the branches.

This is a small delicate and tender species, of a fine light red or pink colour; the fronds an inch or two long, creeping over other submarine vegetables. We find them tubular, and also highly vascular, to which perhaps the reticulated, or glandular, appearance is owing. They are variously and repeatedly branched, linear, very narrow, much compressed, forked at the ends, and somewhat abrupt or notched.—We know nothing with which this *Fucus*, if properly examined, can be confounded.

2135



[1242]

FUCUS coccineus.

Pectinated Crimson Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

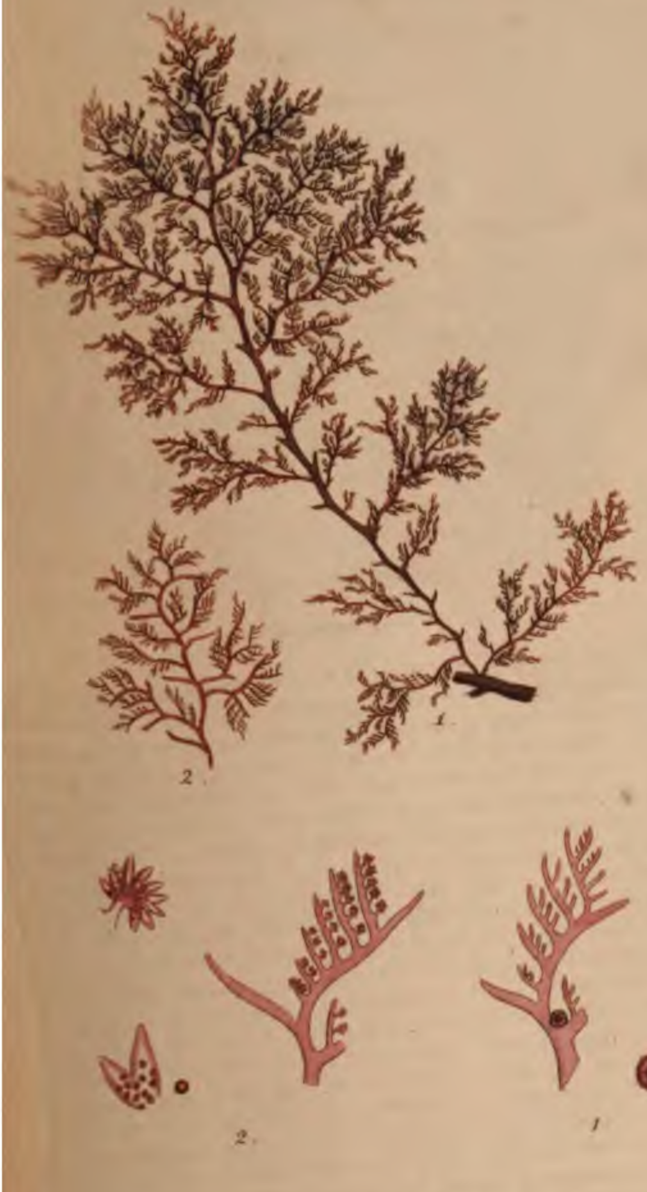
SPEC. CHAR. Frond somewhat cartilaginous, much branched: ultimate branches pectinated on one side. Tubercles globose, sessile.

SYN. Fucus coccineus. *Huds.* 586. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 187. *Turn. Syn.* 291. *With. v.* 4. 119. *Hull.* 324. *Dicks. H. Sicc. fasc.* 16. 25.

F. plocamium. *Gmel. Fuci,* 153. *t.* 16. *f.* 1. *Lightf.* 957.

Muscus marinus rubens pennatus. *Raii Syn. ed.* 2. 8.

ONE of the most common *Fuci* on all our coasts, universally admired for its brilliant colour and elegant structure, which render it preferable to most other sea plants for orna-



Nov. 1. 1803. Publish'd by Ja. Sowerby, London

FUCUS plumosus.

Feathery Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. [illegible]

Spec. Char. [illegible]

Syn. [illegible]

[illegible]

One of the most [illegible] plants [illegible] [illegible]

63

FUCUS plumosus.

Feathery Fucus.

CRYPTOGAMIA Algæ.

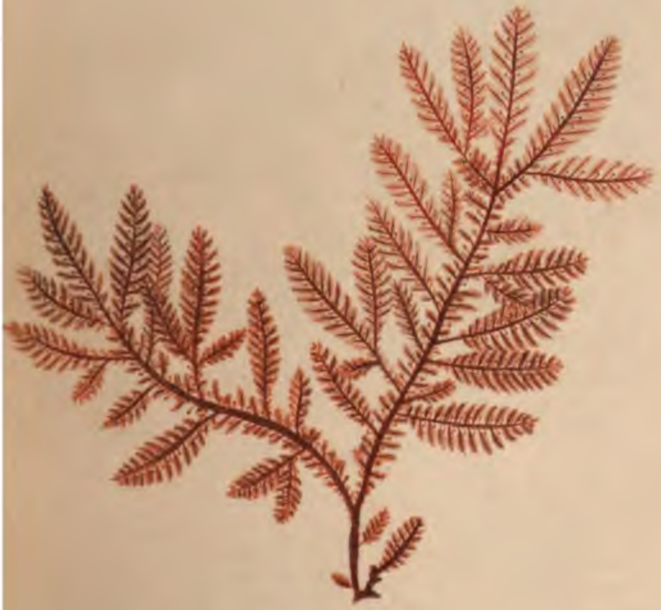
GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond rather cartilaginous, repeatedly branched; the branches doubly pinnate: the ultimate segments opposite, awlshaped, tipped with fruit. Tubercles four-cleft when ripe.

SYN. Fucus plumosus. *Linn. Mant.* 134. *Gooden. & Woodw. Tr. of Linn. Soc. v.* 3. 188. *Turn. Syn.* 296. *Huds.* 587. *With. v.* 4. 120. *Hull.* 324. *Lightf.* 955. *Stackh. t.* 15.

Fucoides purpureum eleganter plumosum. *Dill. in Raii Syn.* 38. *t.* 2. *f.* 5.

ONE of the most elegant of our submarine plants is the *Fucus plumosus*, which is found occasionally on various parts of the British coast, bearing its fructification in summer or autumn.



May 1. 1809 Published by Jas. Sowerby London

FUCUS tomentoſus.

Downy Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

Spec. Char. Frond roundiſh, much branched, downy, green; the branches dichotomous; the points and angles obtuſe.

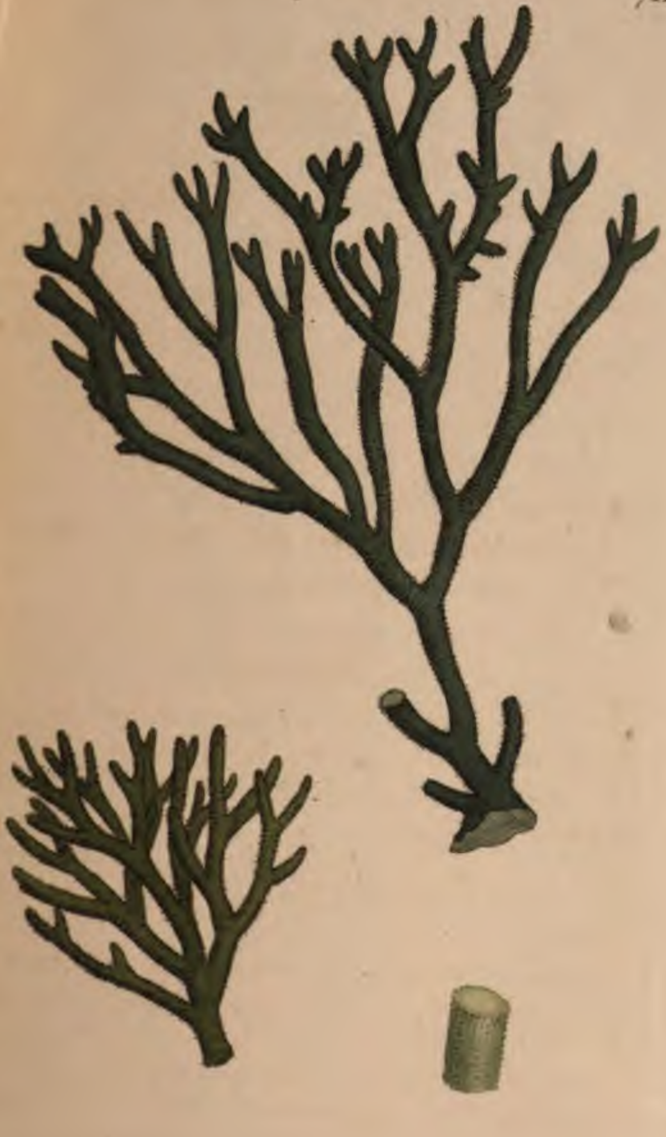
Syn. Fucus tomentoſus. *Hudſ.* 584. *With. v.* 4. 107. *Hull.* 324. *Gooden. & Woodw. in Linn. Tranſ. v.* 3. 195.

Spongia dichotomos teretifolia viridis. *Raii Syn.* 29.

S. dichotomos compreſſa, ex viridi ſplendens. *Dill. in Raii Syn.* 29.

THIS ſpecies ſeems confined to the ſouth-weſt angle of our iſland. Mr. D. Turner and Mr. Sowerby collected it in King's Cove near Marazion, Cornwall, in June laſt. Sir T. Frankland has ſince favoured us with ſpecimens from Exmouth.

712



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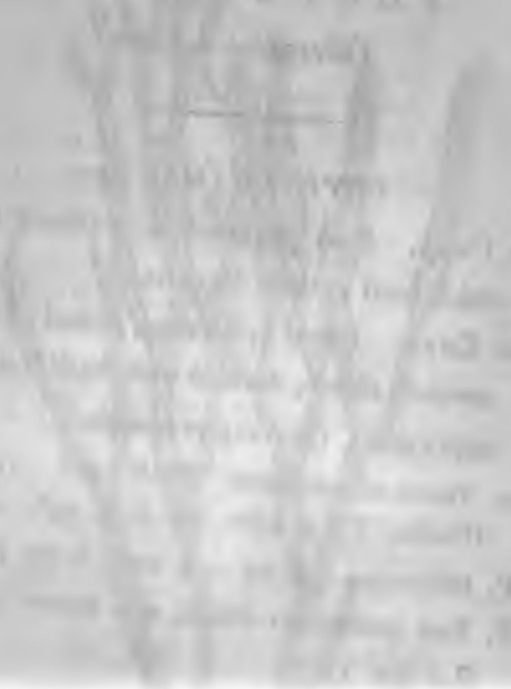

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5.

FUCUS tuberculatus.

Tuberculated Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in cluſtered tuber which burſt at their ſummits.

SPEC. CHAR. Frond cylindrical, forked; its bran unequal, obtuſe, ſtudded with fructification in upper part; their angles rounded.

SYN. Fucus tuberculatus. *Hudſ.* 588. *Gooden. Woodw. Tr. of Linn. Soc. v.* 3. 198. *Hull.*

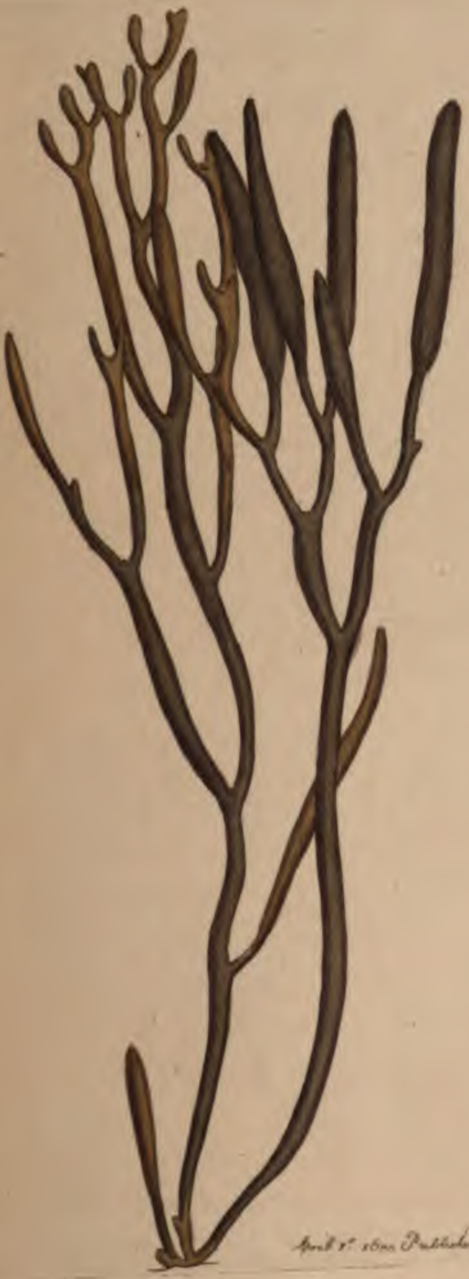
F. bifurcatus. *With. v.* 4. 209. *t.* 17. *f.* 1.

F. Kali geniculato ſimilis, non tamen genicul *Raii Syn.* 43.

GATHERED by Mr. D. Turner and Mr. Sowerby in laſt in King's Cove on the Corniſh coaſt, where, as well Devonſhire, it grows in great plenty.

The frond varies in height from 2 to 12 inches, and tached to the rocks by a ſmall dilated baſe. It is cylind of a dark olive-colour, erect, very much branched in the per part, and diſtinguiſhed by the *axillæ* or angles o branches being rounded, not acute, and their ſummits b and of unequal heights, not forming one level ſurface. I of the terminal branches are elongated, and ſtudded all with prominent tubercles containing the ſeeds. It turns black in drying, like moſt of the olive-coloured *Fuci.*

726



April 1st 1800 Published by J. Sowerby

66.

FUCUS rotundus.

Round-stalked Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tu
which burst at their summits.

SPEC. CHAR. Frond thread-shaped, forked, br
its terminal branches pointed and level. S
lateral, shapeless, spongy, reddish warts.

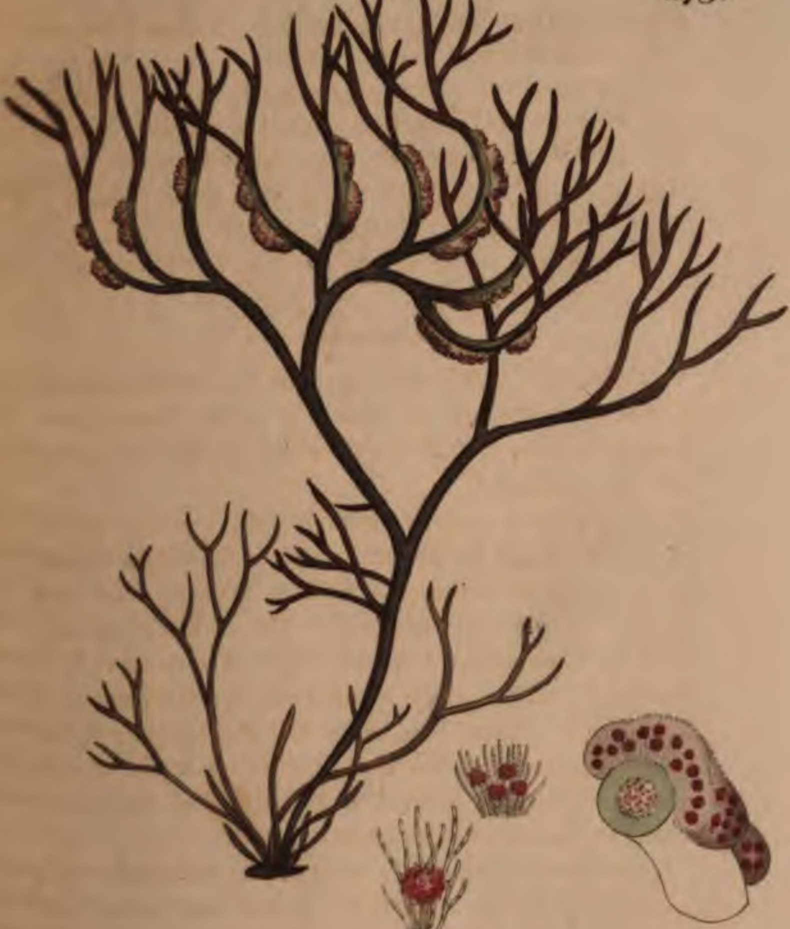
SYN. Fucus rotundus. *Turn. Syn.* 309. *Gm*
110. *t.* 6. *f.* 3. *With. v.* 4. 110.
F. radiatus. *Gooden. and Woodw. Tr. of L. So*
202. *Hull.* 325.

COMMUNICATED from Southampton by Miss B
in November last. It is, according to Mr. Turner,
frequently thrown up on the Yarmouth beach in the a
and winter months.

The root is an expanded leathery disk, bearing a m
of fronds various in height, exactly cylindrical, re
forked, purplish brown, the ultimate branches acute
lerably level at their summits. The divarications
branches form perhaps less acute angles than those of
bricalis, *t.* 824, but are less rounded than in *tuberculatus*,
The fructification of *F. rotundus* best distinguishes it
lodged in lateral shapeless spongy warts, of a pink or
colour, consisting of pellucid, seemingly jointed, fibres,
which are various globules of darker seeds.

F. fastigiatus of Linnæus, a much smaller and slender
is considered by the accurate Mr. Turner as a variety
the proper state of the species being as we have des
Perhaps nevertheless the Linnæan denomination had bett
been retained for our plant; for nothing can be much
than the name given by Gmelin, except the figure
book.

1738



May 1. 1807. Publish'd by Jas. Sowerby, London.

47.

FUCUS lumbricalis.

Worm-like Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

Spec. Char. Frond thread-ſhaped, forked, branched; its terminal branches pointed, equal and level; angles of the divarications acute.

Syn. Fucus lumbricalis. *Gmel. Fuci* 108. *t.* 6. *f.* 2. *Hudſ. ed.* 1. 471. *Gooden. and Woodw. in Linn. Tranſ. v.* 3. 204. *Hull.* 325.

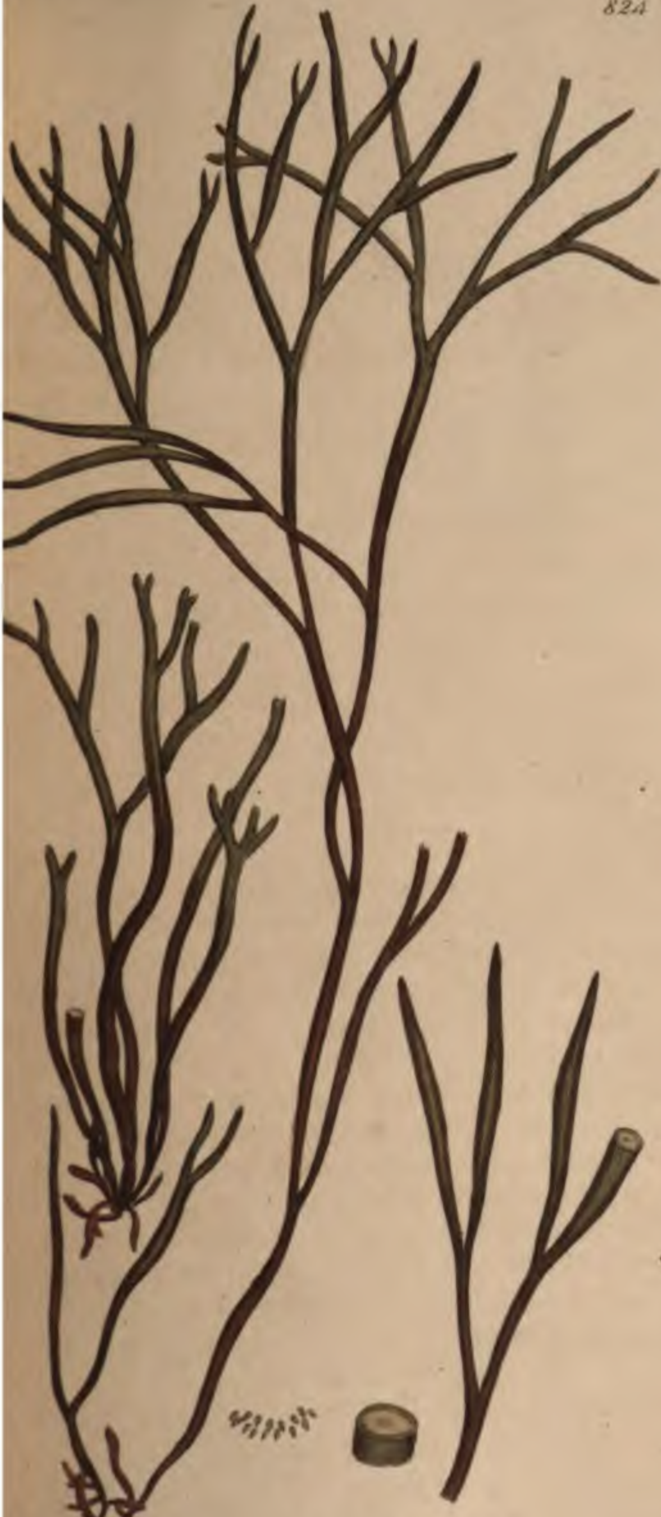
F. faſtigiatus. *Hudſ.* 588. *Lightf.* 930. *With. v.* 4. 110.

F. ſurcellatus. *Hudſ.* 589. *Lightf.* 932. *Fl. Dan. t.* 419.

F. parvus, ſegmentis prælongis teretibus acutis, et Fucus ſive Alga exigua dichotomos, foliorum ſegmentis longiuſculis, craſſis et ſubrotundis. *Raii Syn.* 45.

COMMON on all our coaſts. From the baſe of the frond,

824



Publish'd Decr 1 1801, by Jas Sowerby London

FUCUS plicatus.

Matted Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tuber les, which burſt at their ſummits.

Spec. Char. Frond cartilaginous, rigid, thre d-ſhaped, uniform, much branched; branches cl ſ-tered, entangled, rather inclining to one ſid e. Tubercles lateral, and terminal.

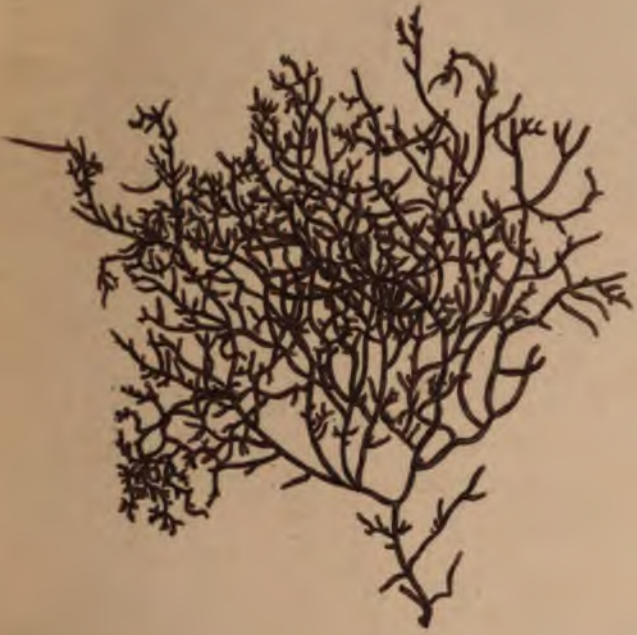
Syn. Fucus plicatus. *Hudſ.* 589. *Turn. Syn.* 323. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 228. *With. v.* 4. 114. *Hull.* 327.

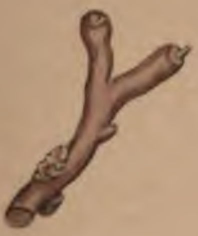
F. trichoides noſtras aurei coloris, ramulorum apicibus furcatis. *Raii Syn.* 45.

F. coralloides erectus. *Ibid.* 51.

THE ſpecimen here delineated was gathered by Mr. D. Turner on the rocks at Sheringham, Norfolk: ſee his *Synopſis*, page 328. On the ſea-ſhore this Fucus is frequently caſt up, and conſiſts of thick, matted, wiry tufts, varying from deep browniſh purple to pale pink, yellow, or a waxy white; to the latter perhaps it is reduced by the action of the air and light. The root, with which we have been hitherto unacquainted, is a ſmall expanded diſk. Fronds numerous, much branched, in a ſingularly irregular and cluſtered manner; all the branches of each cluſter moſtly leaning one way: the whole frond and branches are thread-ſhaped, and nearly of an equal thickneſs throughout. Fructification of numerous, ſmall, dark, prominent tubercles, ſcattered over the branches, and often terminating them.

1089





Novr 1 1802 Published by Jas Sowerby London

69.

FUCUS Griffithsiæ.

Griffithsian Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond cartilaginous, thread-shaped, forked, level-topped, purplish. Tubercles oblong, encircling the frond.

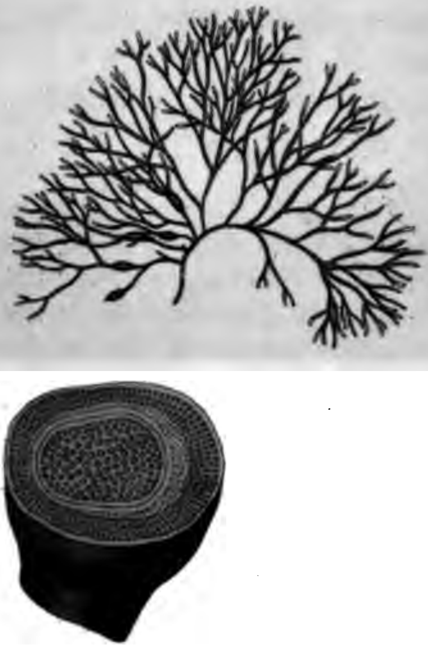
SYN. Fucus Griffithsiæ. *Turn. Hist. Fucor.* 80. *t.* 37.

FOUND by Mrs. Griffiths "at Sidmouth, Devonshire, near the Chit rock, in a little channel formed by sea-water, as it runs off during the ebb tide;" also by Miss Filmore and the Rev. Mr. Jervis on rocks at Exmouth. Dr. Scott has observed the same at Balbriggen near Dublin. It is in perfection from October to December.

From a small callous disk arise several fronds, each 2 or 3 inches high, of a more or less deep purplish hue, much branched, level-topped, slender, thread-shaped, of equal thickness throughout, the upper branches most divaricated, the summits, according to Mr. Turner, often thickened and compressed. The fructification embraces the branches here and there in the form of dark oblong or elliptical tumid warts or tubercles, in which, when cut transversely and examined with a glass, are found innumerable horizontal, radiating, jointed filaments, among which the seeds are presumed to be lodged.

The mode of fructification, so different from all the *Fuci* previously known, clearly distinguishes this species. We have, with Mr. Turner's advice and concurrence, corrected the termination of the specific name so as best to suit the lady whom it commemorates.

1926



Sept 1. 1808. Publish'd by Jas Sowerby London.

70.

FUCUS confervoides.

Warty Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Frond thread-shaped, branched, purplish: branches unequal, mostly leaning one way, tapering at each end. Tubercles hemispherical, lateral, sessile, acute.

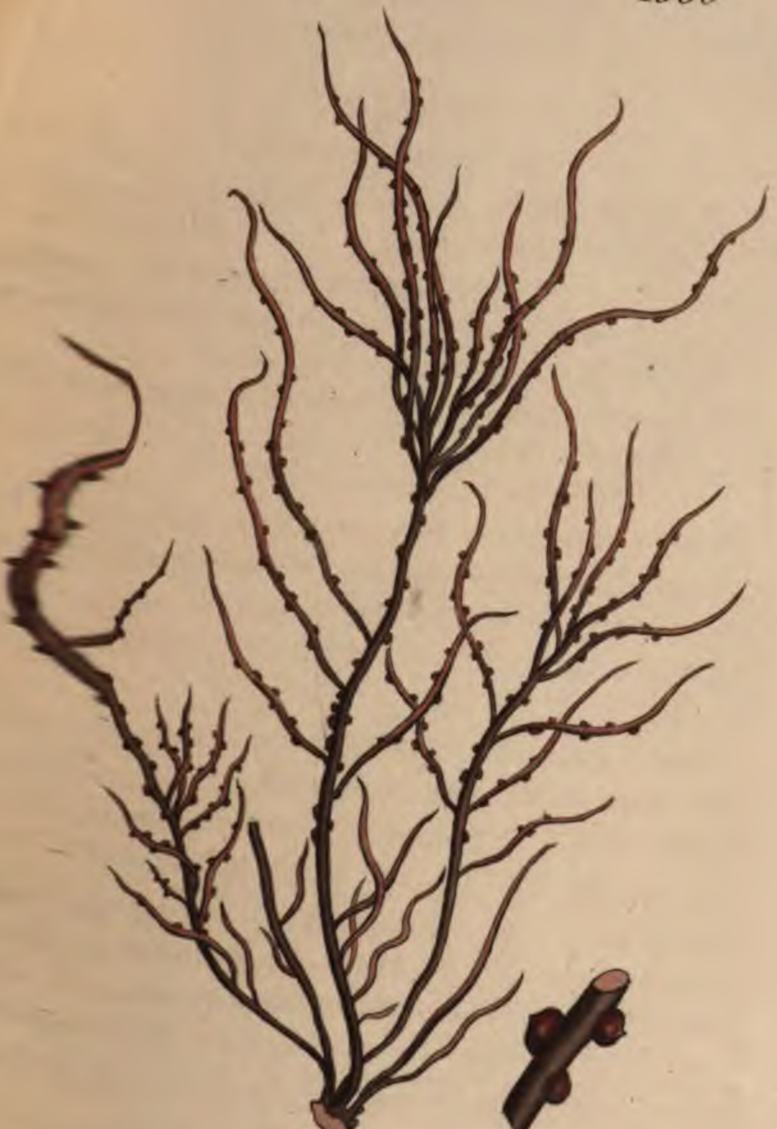
Syn. Fucus confervoides. *Linn. Sp. Pl.* 1629. *Turn. Syn.* 328. *With. v.* 4. 114. *Hull.* 325. *Gooden. and Woodw. Tr. of L. Soc. v.* 3. 208.
F. verrucosus. *Huds.* 588.
F. marinus purpurascens parvus, caule et ramulis seu foliolis teretibus. *Raii Syn.* 50.
β. F. teres rubens minus ramosus, in longum protensus. [illegible]

Sent by Mr. W. Borrer from Brighthelmstone. It is not uncommon on the coasts of Britain in the autumn or winter.

Root a small flat callous substance, bearing several fronds, [illegible] length, purplish with a brown tinge, [illegible] common packthread, much branched. Branches irregular, scattered, each parcel of them pointing [illegible] more or less, tapering to a sharp zigzag point at each end, and somewhat contracted towards their base: [illegible] or compound. Tubercles numerous, scattered, sessile, hemispherical, with a small prominent point.

Many [illegible] have confounded this with *F. flagelliformis*, [illegible]

1668



Novr 1. 1806. Publish'd by Jas Sowerby, London.

FUCUS flagelliformis.

Whip-cord Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

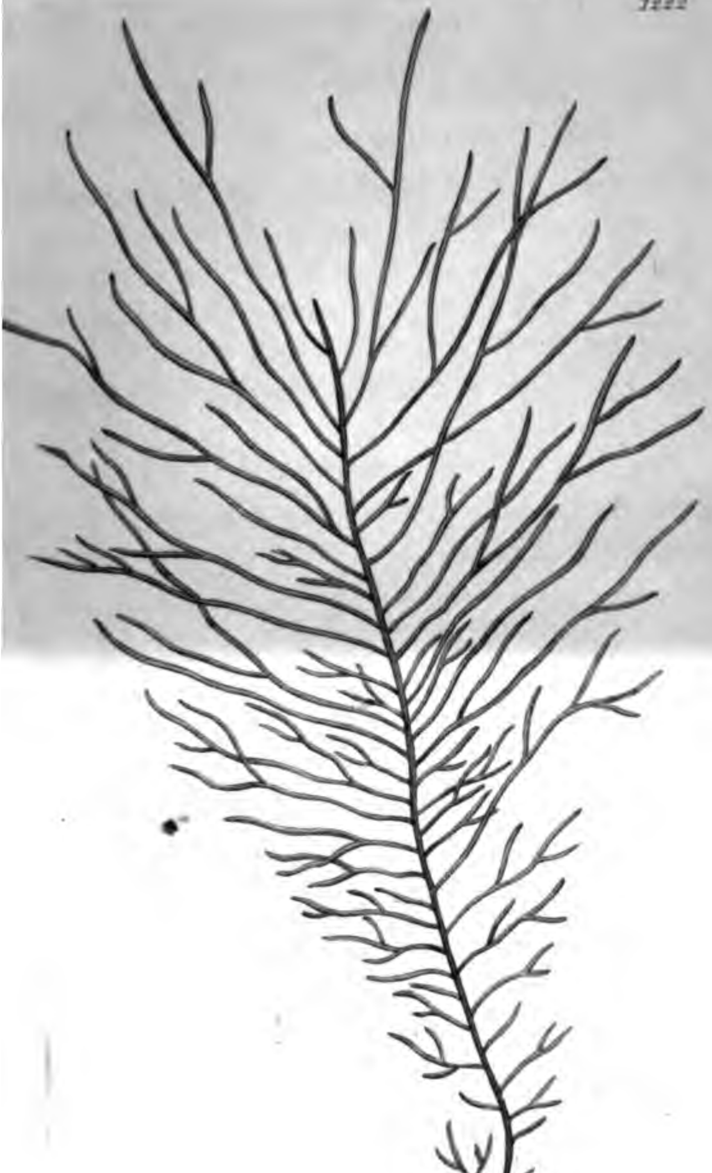
SPEC. CHAR. Frond thread-shaped, branched, slippery: branches in two rows, mostly alternate, elongated, simple or divided, naked, obtuse.

SYN. Fucus flagelliformis. *Fl. Dan. t.* 650. *Lightf.* 928. *Turn. Syn.* 335.

FREQUENT on the sea shores, though not clearly distinguished from *F. confervoides* either by Hudson, Lightfoot, Goodenough or Woodward. Our specimen was gathered at Falmouth by Mr. Turner and Mr. Sowerby. We have the same from Sir T. Frankland.

Root a minute tubercle, supposed to be annual. Fronds cylindrical, slender, bearing numerous alternate obtuse branches of their own figure, either simple or subdivided, sometimes repeatedly branched, and greatly elongated, all tapering at their base. The whole plant is slimy and slippery to the touch, being, as Mr. Turner observes, covered with a mucus, which in the water gives it a downy appearance. Its colour is a dull brownish olive, not very deep. The fructification is entirely unknown, so that Mr. Turner doubts whether it may not prove an *Ulva*.

F. confervoides is distinguished by its numerous short setaceous sharp branches, its purple colour, and hemisphærical lateral tubercles, which pretty constantly occur.



Oct 1 1803 Published by Jas Sowerby, London.

[2487]

FUCUS Filum.

Thread Fucus, or Sea Laces.

CRYPTOGAMIA Algæ.

[illegible] Char. [illegible] immersed in [illegible]

[illegible]

[illegible]

[2487]

FUCUS Filum.

Thread Fucus, or Sea Laces.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercle which burst at their summits.

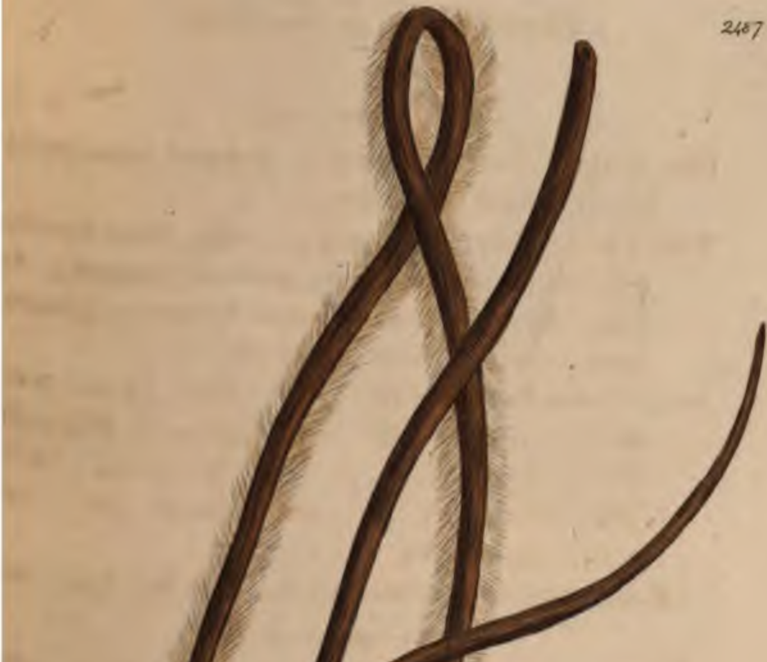
Spec. Char. Frond cartilaginous, slimy, thread-shaped, tapering at both ends, perfectly simple, tubular, with occasional internal transverse partitions; spirally twisted when old.

Syn. Fucus Filum. *Linn. Sp. Pl.* 1631. *Huds.* 587 *With. v.* 4. 108. *Hull.* 324. *Gooden. & Wood* *Tr. of Linn. Soc. v.* 3. 193. *Turn. Syn.* 338 *Hist. Fucor. v.* 2. 37. *t.* 86. *Stackh. Ner.* 40 *t.* 10. *Lightf.* 963.

F. chordam referens teres prælongus. *Raii Syn.* 40

EVERY part of the British coasts in general affords thi Fucus. The root is a very small callous disk, suspected by Mr Turner to be annual. Fronds either solitary, or two, three, o four together, from one to twenty feet long, perfectly unbranched, thread-shaped, slimy, olive-coloured, about a quarter of an inch in diameter at the thickest part, tapering at both ends. The central part is tubular, generally filled with watery mucus, and interrupted by frequent, more or less complete and regular, transverse membranes. The coat itself is thick but not very tough, highly cellular, or composed of interrupted tubes. In September Mr. W. Borrer found the outside to be covered with minute stalked granules, each containing an apparent seed. These are at length deciduous. They seem to have been observed by Mr. Pigott, as related by Mr. Turner in his *Historia*, and we cannot but consider them as the fructification. Much of the frond is often clothed with jointed whitish fibres, like fine hairs, which have all the aspect of a parasitical *Conferva*.

2487



[illegible]

FUCUS lycopodioides.

Club-Moſs Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

Spec. Char. Frond thread-ſhaped, branched, clothed on every ſide with denſe prominent cylindrical briſtles. Branches generally undivided.

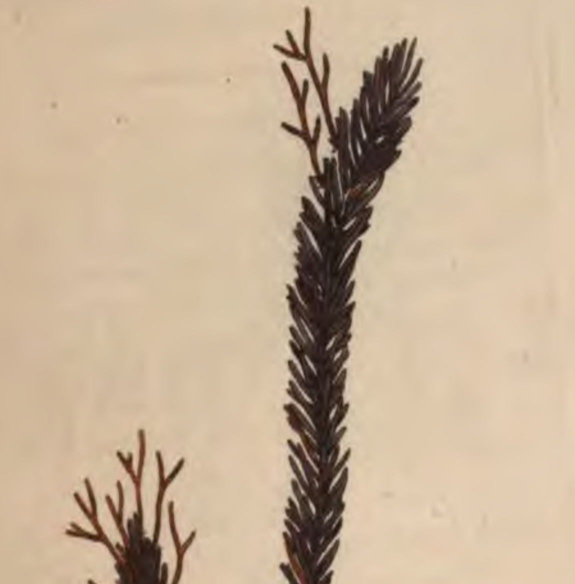
Syn. Fucus lycopodioides. *Linn. Syſt. Veg. ed.* 14. 969. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 223. *Turn. Syn.* 343. *With. v.* 4. 107. *Hull.* 327.
F. Lycopodium. *Stackh. Ner.* 107. *t.* 17. Turner.
Conferva ſquarroſa. *Fl. Dan. t.* 357.

MR. WOODWARD originally informed us of his having found this rare Fucus at Cromer, and we ſuſpect the mention of Yarmouth in the Linn. Tranſ. to be a miſtake. The Rev. H. Davies received it from the Hebrides. Our ſpecimens were obligingly communicated by Mr. N. J. Winch, from Bates's Iſland, near Hartley Pans, Northumberland, where it is not uncommon on the ſtems of *F. digitatus*. With them we received the following deſcription, drawn up from a careful examination of the recent plant, by Mr. R. Waugh and Mr. J. Thornhill. The laſt-mentioned gentleman has ſeveral times found the plant on the coaſt of Northumberland and Durham.

" Root a very ſmall callous diſk. Stem 6 or 8 inches long, filiform, about as thick as a crow's quill, moſtly divided into a few long almoſt wholly ſimple branches; denſely covered with *ſetæ* pointing in every direction, from $\frac{1}{4}$ to $\frac{1}{2}$ an inch long, moſtly ſimple, ſometimes forked, nearly of an equal thickneſs throughout. When magnified the *ſetæ* appear uniform, without *ſepta*, ſemidiaphanous, of a dull red. Whole plant reddiſh brown, drying black. Fructification unknown."

Conferva rubra frequently grows on this Fucus, and the above gentlemen ſuſpect its young ſhoots, being jointed, may have cauſed the *ſetæ* to be ſo deſcribed. We ſhould acquieſce in this opinion, as we can find no joints in the Linnean ſpecimen; but Mr. Turner withholds his aſſent.

1163



May 1 1803 Publiſhed by Jas Sowerby London

74.

FUCUS pinaſtroides.

Pine Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

Spec. Char. Frond thread-ſhaped, much branched: ultimate branches cloſely imbricated, in pairs, awl-ſhaped, rather inclining to one ſide, curved, entire.

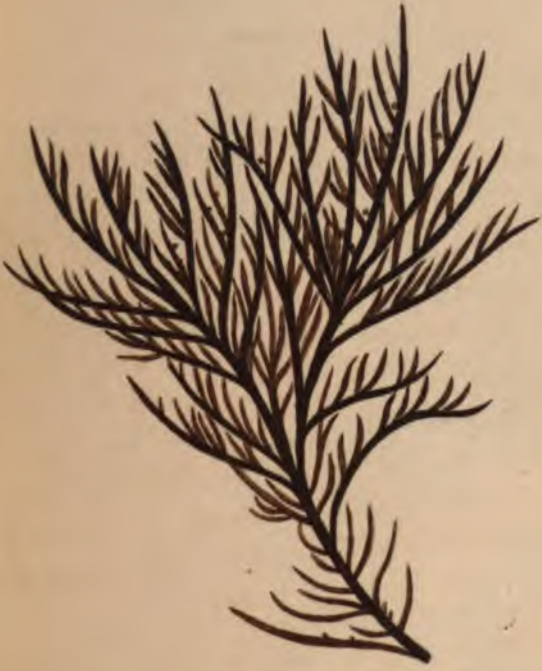
Syn. Fucus pinaſtroides. *Gmel. Fuci* 127. *t.* 11. *f.* 1. *Gooden. and Woodw. in Linn. Tranſ. v.* 3. 222. *Hull.* 327.

F. incurvus. *Hudſ.* 590. *With. v.* 4. 115.

Pinus maritima, ſive Fucus teres, cujus ramuli ſetis ſursùm tendentibus ſunt obſiti. *Raii Syn.* 50.

FREQUENT, either growing on rocks, or caſt up on the

1042



July 1. 1802 Publish'd by Jas Sowerby, London

75.

FUCUS ſubfuſcus.
Browniſh Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

Spec. Char. Frond thread-ſhaped, much branched; ultimate branches moſtly alternate, awl-ſhaped, ſhort. Fruit in minute, oblong, pointed, cluſtered pods.

Syn. Fucus ſubfuſcus. *Woodw. Tr. of Linn. Soc. v.* 1. 131. *t.* 12. *and v.* 3. 212. *Turn. Syn.* 350. *With. v.* 4. 115. *Hull.* 326.

F. confervoides. *Hudſ.* 591.

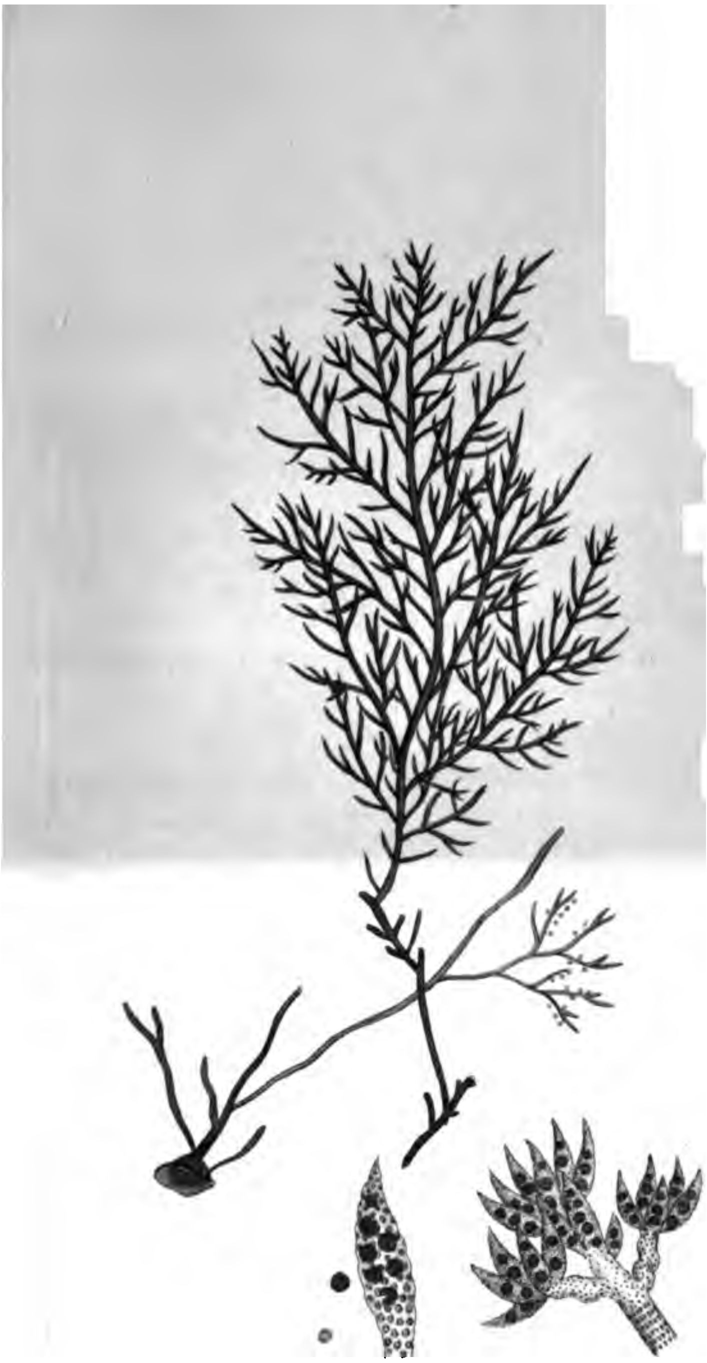
F. variabilis. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 220. *With. v.* 4. 116. *Hull.* 326.

COMMON on the Norfolk coaſt, and found alſo in Scotland and Cornwall; yet it is ſo variable a ſpecies as to have been little underſtood, even by botaniſts moſt converſant with this tribe. Mr. Turner, to whom we are obliged for perfect ſpecimens, has illuſtrated its hiſtory at length in his *Synopſis*, which, added to what may be found in the Linnean Tranſactions, leaves nothing to be deſired on the ſubject. We muſt content ourſelves with ſuch a deſcription as may ſuffice to aſcertain the ſpecies.

The colour is a light reddiſh brown, paleſt in the younger part. Subſtance firm and cartilaginous. Root a thin expanded diſk. Fronds numerous, thread-ſhaped, much, and for the moſt part alternately, branched, rough about the baſe with the remains of old branches; their ultimate diviſions awl-ſhaped and ſhort. Fructification peculiarly diſcriminative of the ſpecies, produced in the ſpring or early in ſummer, (when alone the plant is entire and in vigorous vegetation,) in the form of minute, oblong, cluſtered, pointed pods, growing on ſhort axillary or lateral ſtalks, and each containing about 8 dark ſeeds.

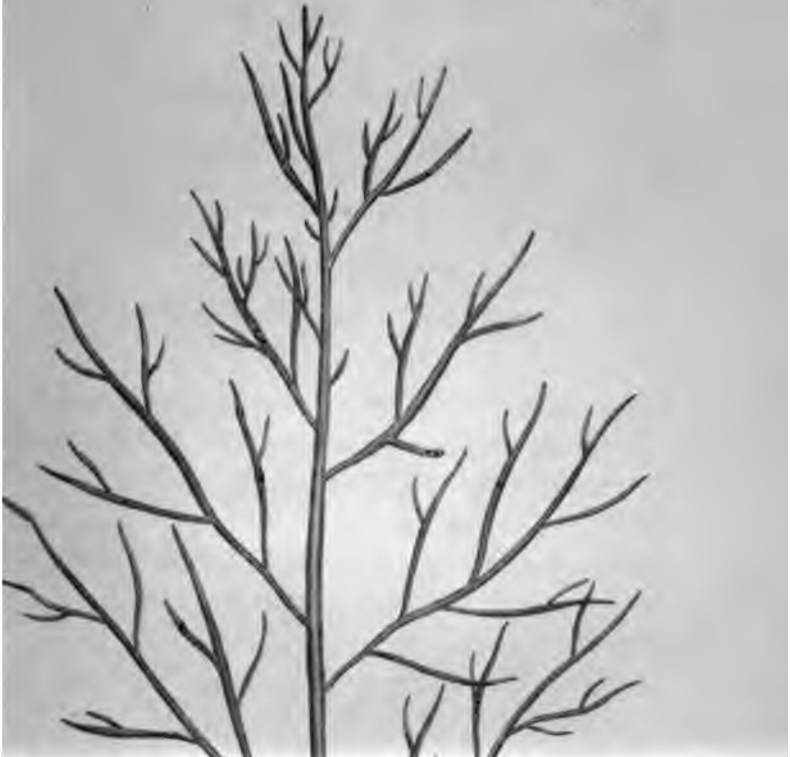
FICUS CARICA.

Common Fig.



May 1 1803 Publiſhed by Jas Sowerby London

1243



Dec.r 1 1803 Published by Jas. Sowerby. London

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

FUCUS Wigghii.

Wigghian Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tubercles which burſt at their ſummits.

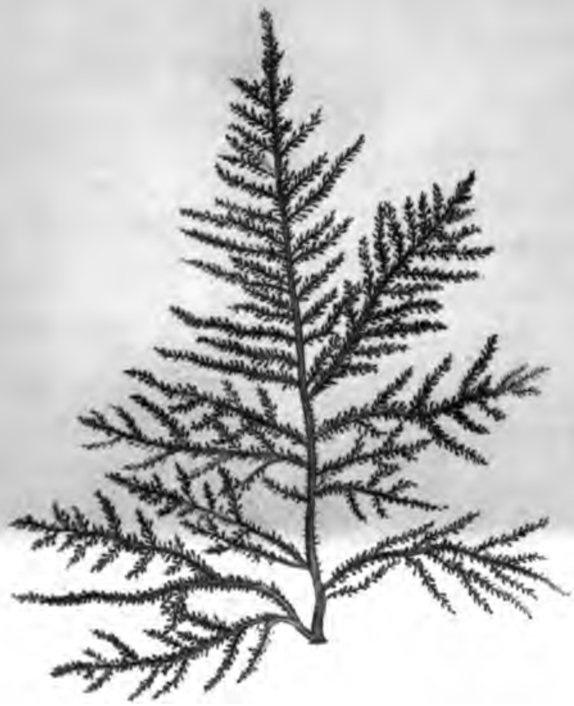
Spec. Char. Frond thread-ſhaped, tender, much branched; ultimate branches briſtle-ſhaped, ſcattered, moſtly ſimple, each tipped with a lanceolate pointed capſule.

Syn. Fucus Wigghii. *Turn. Tr. of Linn. Soc. v*[illegible] 6. 135. *t.* 10. *Synopſ.* 362.

THE only knowledge we have of this Fucus is from Mr. Wigg, who firſt found it on the Yarmouth coaſt, and Mr. Turner, who has deſcribed it by the name of its diſcoverer. It is found in the middle of ſummer, thrown up on the coaſt, and is preſumed to be annual.

In delicacy of form and texture, almoſt in beauty of colour, this nearly approaches *F aſparagoides*, deſcribed in our [illegible]th vol. *t.* 571. the only ſpecies with which it can by any means be confounded. The differences however are plain and certain. The little ultimate branches of *F. Wigghii* are not arranged in an oppoſite manner, but irregularly though denſely ſcattered. Thoſe which bear the fructification are longer, not ſhorter, than the others, and much more numerous than in *F. aſparagoides*. The ſeeds are imbedded in a terminal, lanceolate or ovate, pointed pod.

1163



May 1 1803 Published by Jas Sowerby London

FUCUS acicularis.

Needle-branched Fucus.

CRYPTOGAMIA Algæ.

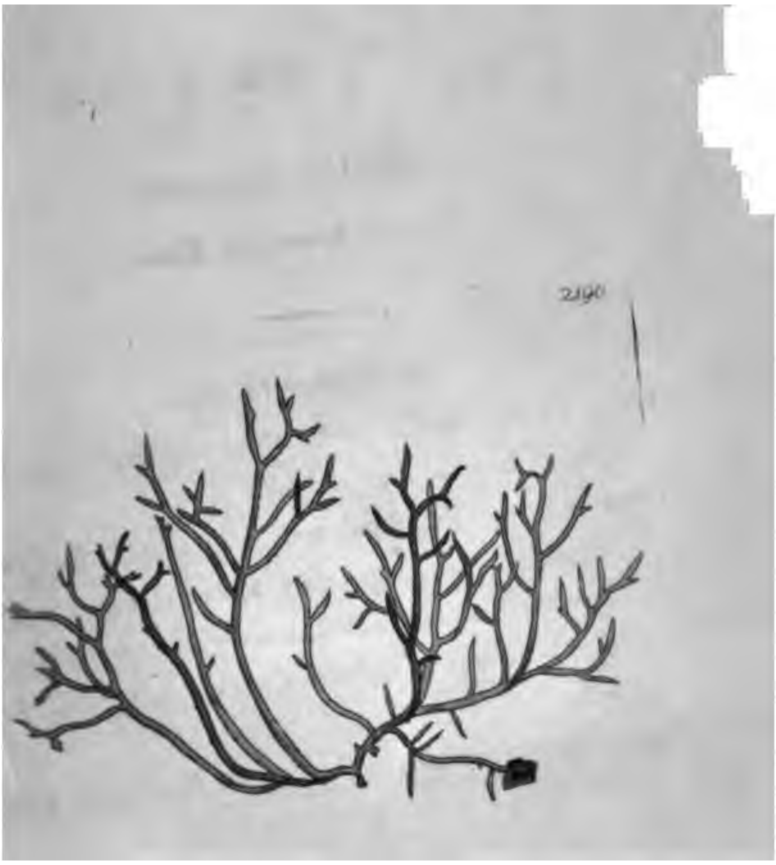
Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Frond pale red, somewhat cartilaginous, thread-shaped, repeatedly forked; its segments spreading, sharp-pointed, beset with scattered thorn-like processes. Tubercles scattered, sessile, globular.

Syn. Fucus acicularis. *Turn. Hist. Fucor.* v. 2. 143. t. 126.

FOUND cast on the shore of Cornwall by P. Rashleigh, Esq. and at Belfast by Mr. Templeton, according to Mr. Turner, to whom we are obliged for a specimen.

Several fronds, 2 or 3 inches long, arise from one small callous base, and seem, as Mr. Turner suspected, to creep by their lower branches. Above they are subdivided, thread-shaped but occasionally somewhat flattened, loosely spreading, their upper part considerably branched and divaricated, with many short, sharp, spine-like, ultimate segments. The colour is a purplish red, white within. The fructification is said to consist of pale red globular lateral warts, but this we have never seen.


2190

79.

FUCUS aſparagoides.

Aſparagus Fucus.

CRYPTOGAMIA Algæ.

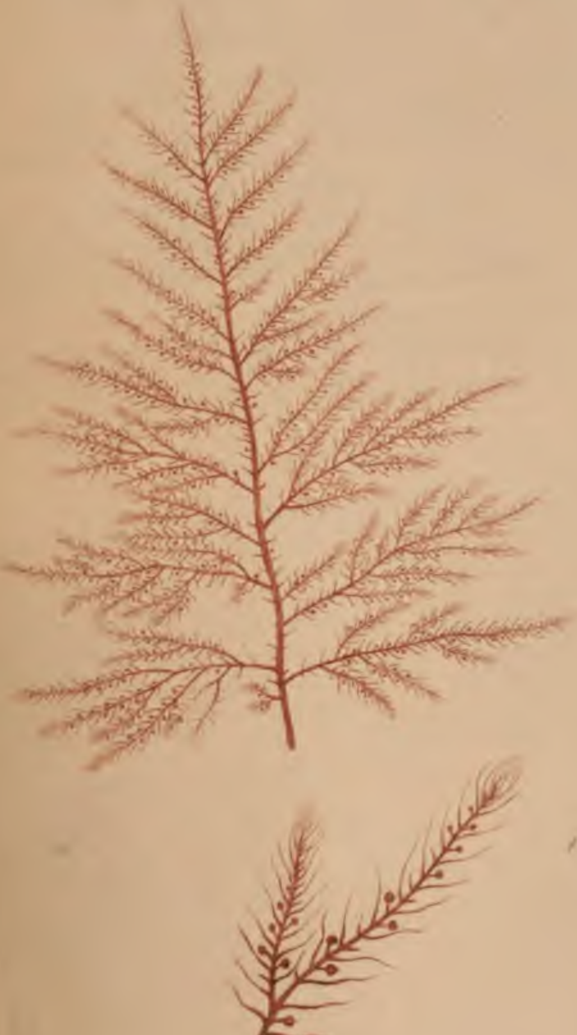
GEN. CHAR. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

SPEC. CHAR. Frond round, thread-like, much branched. Ultimate branches briſtle-ſhaped, oppoſite. Tubercles globular, on footſtalks, ſolitary, alternately oppoſite to the little branches.

SYN. Fucus aſparagoides. *Woodw. Tr. of Linn. Soc. v.* 2. 29. *t.* 6. *Gooden. and Woodw. Tr. of L. Soc. v.* 3. 214. *With. v.* 4. 117.

FOUND on the beach at Yarmouth from June to November, though ſeldom in abundance, bearing its fruit chiefly in Auguſt and September. Mr. Wigg firſt diſcovered it, and gave it to Mr. Woodward, whoſe deſcription, with a figure, may be found in the Linn. Society's 2d volume. The name not unaptly expreſſes the general form of the plant, which in ſome meaſure, though not preciſely, recalls the idea of a miniature garden Aſparagus in fruit.

It grows about a ſpan high, much and alternately branched, the ſtem and branches being all ſlender and round. The ultimate ramifications only are oppoſite, thickly ſet, and almoſt pectinate, awl-ſhaped, acute, ſcarcely a quarter of an inch long, and often ſhorter: indeed each of the longeſt is generally oppoſed by a much ſhorter one. The fructifications, in the form of a ſmall red ball, grow on footſtalks, alternate to each other, or irregularly ſcattered, but each of them conſtantly oppoſite to one of the awl-ſhaped branches. The colour, when freſh, is a beautiful deep tranſparent crimſon. Mr. Turner, who communicated our ſpecimen, conſiders this Fucus as an annual. Mr. Woodward has found it actually growing upon ſtones and pebbles on the coaſt at Cromer, ſince his firſt account of it was publiſhed.



FUCUS pedunculatus.

Pedunculated Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in cluſtered tub
which burſt at their ſummits.

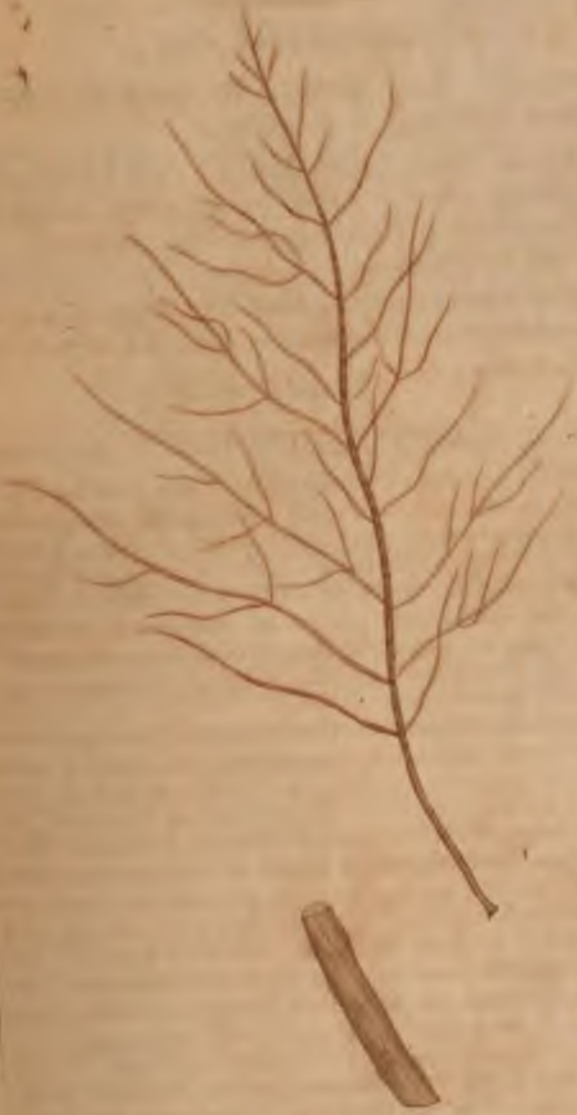
Spec. Char. Stem thread-ſhaped, ſimply branc
a pinnate manner. Branches capillary, ſon
two-ranked. Tubercles obovate, ſcattere
ſimple footſtalks.

Syn. Fucus pedunculatus. *Hudſ.* 587. *With. v.*
Goodenough & Woodward in Linn. Tr. v. 3.
F. Gærtnera. *Gmel. Fuc.* 164. *t.* 19.

Specimens of this rare and elegant *Fucus* have be
us from the Yarmouth beach by Mr. D. Turner, along
drawing moſt accurately taken by the hand of Mrs.
It is a ſpecies hitherto little known. The deſcription of
is imperfect, but there ſeems no doubt of its being his
culatus. We think there can be as little uncertainty
Gmelin's ſynonym, which the authors of the valuable p
the Linnæan Tranſactions heſitated to quote, having no
nal ſpecimens to compare with theirs.

It belongs to that ſubdiviſion of the genus whoſe ſtems ar
or thread-ſhaped, and is ſimply branched, the branche
by no means regularly alternate, nor uniformly diſtan
each other; but they nevertheleſs ſpread nearly in two ran
are ſimple, long and capillary, not all of an equal length.
are no leaves. The branches are thickly ſet with minute
or obovate capſules, on ſimple ſtalks generally of the
length, and theſe capſules are for the moſt part crowne
a ſpreading tuft of green filaments, which are jointed.
colour of the whole plant beſides is a pale browniſh olive
one has yet aſcertained whether theſe filaments certainly
to the plant, or are a paraſitical *Conferva.* Their being j
and not always preſent, favours the latter opinion.
poſſible the plant may be viviparous, and the filaments
ſpring budding out of the capſule; a ſuppoſition we
readily adopt, were it not for the joints, which certain
not to be ſeen in the ſtem or branches of the *Fucus* itſel

545



[illegible]

FUCUS capillaris.

Red Capillary Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tub
which burst at their summits.

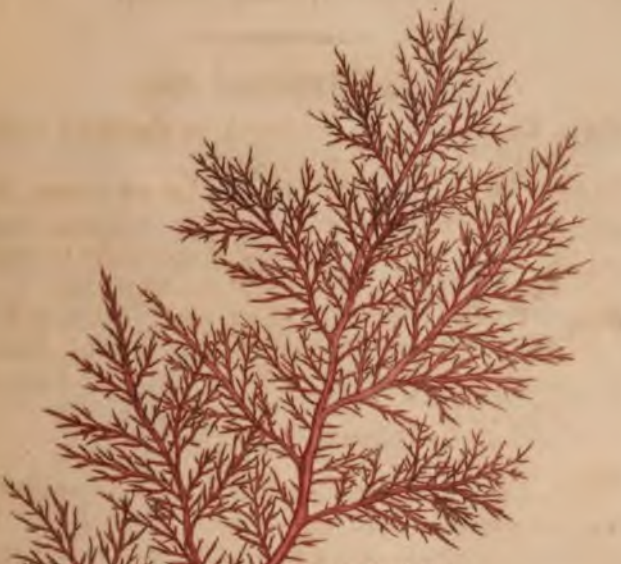
SPEC. CHAR. Frond red, somewhat gelatinous, t
shaped, very much branched: ultimate se
awlshaped, short, crowded, imperfectly two-r
Seeds imbedded in some of the segments.

SYN. Fucus capillaris. *Huds.* 591. *With. v.* 4
Hull. 329. *Gooden. & Woodw. Tr. of Lin*
v. 3. 231, *note. Turn. Syn.* 370. *Hist. Fucor*
65. *t.* 31.

WE are obliged to Sir Thomas Frankland for specim
this rare plant, collected on the Scarborough coast.
authority, decisive in such a case, it is declared to be *F.*
laris of Hudson, a species concerning which all other bo
have been in doubt. Even Mr. Turner has been in th
predicament; but besides specimens from Sir T. Fran
he has received some from Anglesea, equally authentica
another correspondent of Mr. Hudson, the Rev. H. D

This is a beautiful species, of a fine pink or crimson
and gelatinous substance, jointed like *Rivularia Op*
t. 1868, and consisting of several fronds from one small
base, each 8 or 10 inches high, threadshaped, much a
pinnately branched; the chief branches longest in the
part of the frond, often nearly opposite; the subordinat
mostly alternate, and, according to Hudson, incline
branched. The latter are very numerous and delicate, ta
at their base and summit, sometimes observed by Mr.
to lodge a row of red seeds in their centre. We observe
brownish lateral or imbedded warts, but dare not aver
to be any part of the fructification. This species is fo
the summer, and presumed to be annual.

2190.



[illegible] by Jas. Sowerby London

FUCUS clavellosus.

Stone-crop Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

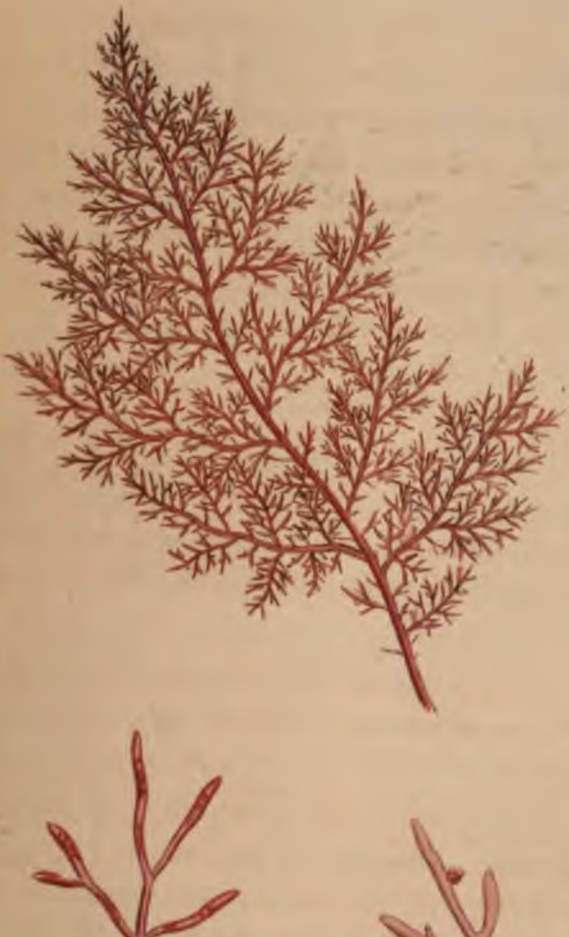
Spec. Char. Frond thread-shaped, tender, repeatedly branched; branches mostly alternate, somewhat two-ranked: the ultimate ones even, rather tumid, blunt. Tubercles lateral, inversely urn-shaped.

Syn. Fucus clavellosus. *Turn. Tr. of Linn. Soc. v.* 6. 133. *t.* 9. *Syn.* 378.

FOR the knowledge of this Fucus, as well as for the specimen figured in our plate, we are obliged to Mr. Turner, who has found it on the beach at Brancaster and Yarmouth, Norfolk, bearing its fruit in July and August, being undoubtedly but an annual [illegible]. Sir T. Frankland has often observed it at Scarborough.

It is next allied to F. *kaliformis*, v. 9. *t.* 640, but has never, like that species, any jointed appearance, nor, according to Mr. Turner, any disposition to be whorled, neither are the tubercles globular, but inversely urn- or top-shaped, larger, and growing more scatteringly, than in the *kaliformis*. We find them often axillary, but not universally so. The whole size of the plant is smaller than in *kaliformis*. Its colour is a fine pale pink. The frond is much and repeatedly branched, generally in an alternate manner; the little ultimate branches somewhat club-shaped and obtuse. A little cluster of dark-red seeds is observable at the centre of each tubercle, which, when the tubercle discharges them, are found scattered over the branch, an usual circumstance in this tribe.

1203



Apl 1 1803, Published by Jas Sowerby, London

83.

FUCUS kaliformis.

Saltwort Fucus.

CRYPTOGAMIA Algæ.

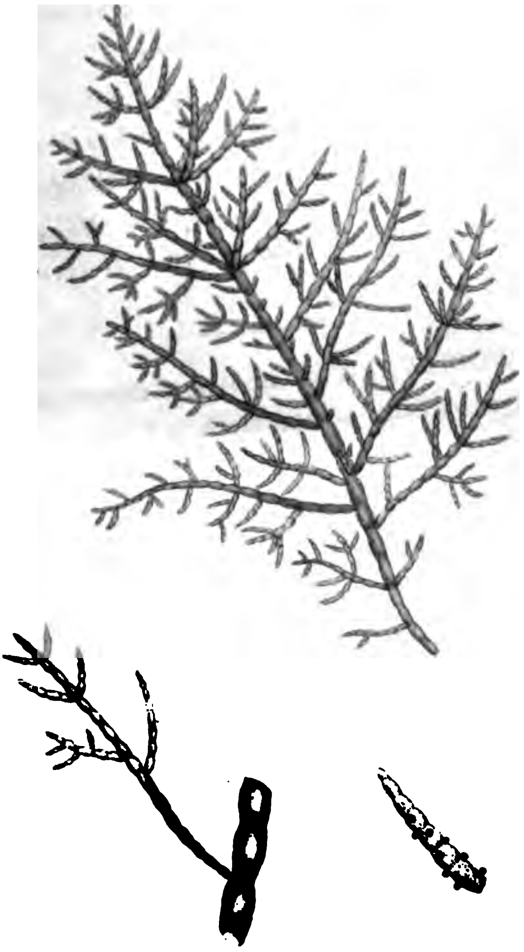
Gen. Char. *Seeds* produced in cluſtered tubercles, which burſt at their ſummits.

Spec. Char. Frond cylindrical, rather gelatinous, tubular, much branched. Branches ſcattered: the ultimate ones partly whorled, awlſhaped, bluntiſh.

Syn. Fucus kaliformis. *Gooden. & Woodw. Tr. of Linn. Soc. v.* 3. 206. *t.* 18. *With. v.* 4. 89. *Hull.* 325.

Mr. WOODWARD firſt aſcertained this as a new ſpecies from ſpecimens found on the beach at Yarmouth. Mr. D. Turner and Mr. Sowerby detected the ſame growing at Fal-

640



[illegible]

84.

FUCUS articulatus.

Jointed Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond tubular, regularly contracted at intervals as if jointed, much branched: joints elliptical: branches forked and whorled.

SYN. Fucus articulatus. *Lightf.* 959. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 217. *Turn. Syn.* 383. *Stack. Ner.* 28. *t.* 8. *With. v.* 4. 90. *Hull.* 326.

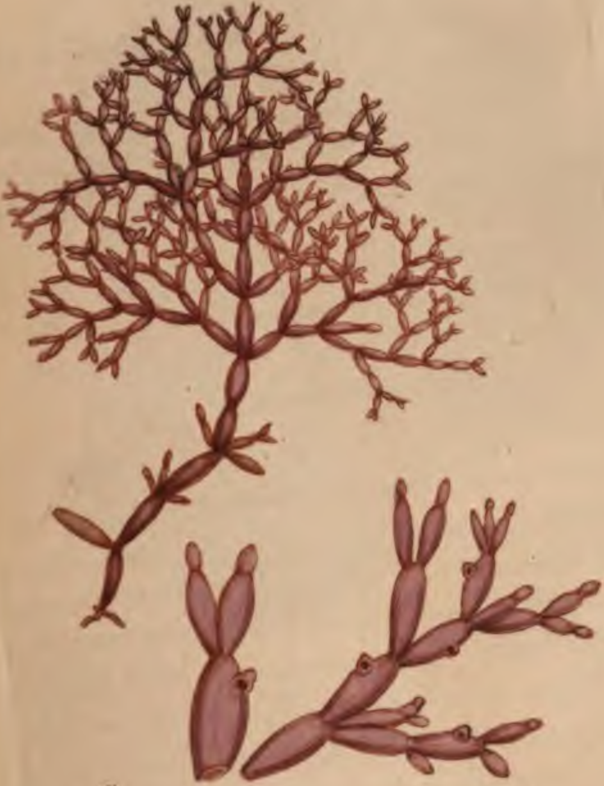
Ulva articulata. *Huds.* 569.

Corallina lenta purpurea compressa. *Raii Syn.* 34.

GATHERED in full fructification in the summer, at Larne, in Ireland, by Mr. Drummond. Mr. Turner, in whose account of this species we can find nothing to correct or improve, mentions it as not uncommon on most parts of the British coast, particularly the southern and western counties.

The root is creeping. Fronds in large tufts, very much branched, sometimes whorled, of a red or purple hue, transparent, tubular, cylindrical, regularly contracted at intervals into elliptical apparent joints, but these are destitute (as Mr. Turner asserts) of *septa* or partitions, in which they totally differ from the articulations of a *Conferva*. Tubercles small, prominent, solitary on the sides of some of the joints, each filled with a mass of red seeds, which when ripe are sprinkled over the adjoining part of the branch; and hence Mr. Hudson, seeing the plant in that state, referred it to *Ulva*.

1574



March 1. 1806. Publish'd by Jas. Sowerby, London.

85.

[2183]

FUCUS Bursa.

Pouch Fucus.

CRYPTOGAMIA Algæ.

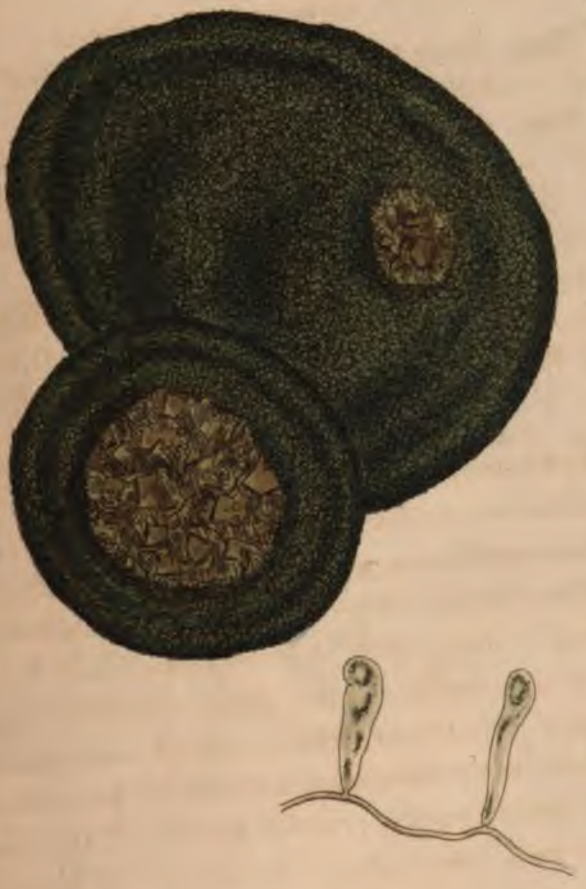
GEN. CHAR. *Seeds* produced in clustered tubercles which burst at their summits.

SPEC. CHAR. Frond green, globose, hollow, minutely papillary, composed of club-shaped concentric vesicles, connected by capillary, tubular, branching entangled filaments.

SYN. Fucus Bursa. *Turn. Hist. Fucor. v.* 3. 6. *t.* 136.
Alcyonium Bursa. *Linn. Syst. Nat. v.* 1. 1295.
Lamarckia Bursa. *Olivi in Zoolog. Adriat.* 258.

THIS strange production appears from Mr. Turner's work to have been observed on several parts of the English sea coast. Our specimens were gathered in the Irish seas by Mr. Templeton near Belfast, and their fibrous roots were attached to fragments of shells. Each plant is a hollow spongy ball, from 1 to 10 inches in diameter, green, composed of entangled pellucid jointed fibres, bearing numerous concentric oblong vesicles, whose obtuse summits reaching to the outside of the ball, give it a papillary or velvety appearance. Olivi says the seeds are in masses between the vesicles. He makes a new genus of this plant, adding another, the *Ulva decorticata* of Mr. Woodward, *Tr. of Linn. Soc. v.* 3. 55. Mr. Turner shows its affinity to *F. tomentosus, t.* 712, and therefore, for the present at least, reckons it among *Fuci*. In mode of growth it closely resembles *Conferva ægagropila, t.* 1377.

2183.



Aug 1 1810 published by Jas. Sowerby London.

86.

FUCUS amphibius.

Amphibious Curve-pointed Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

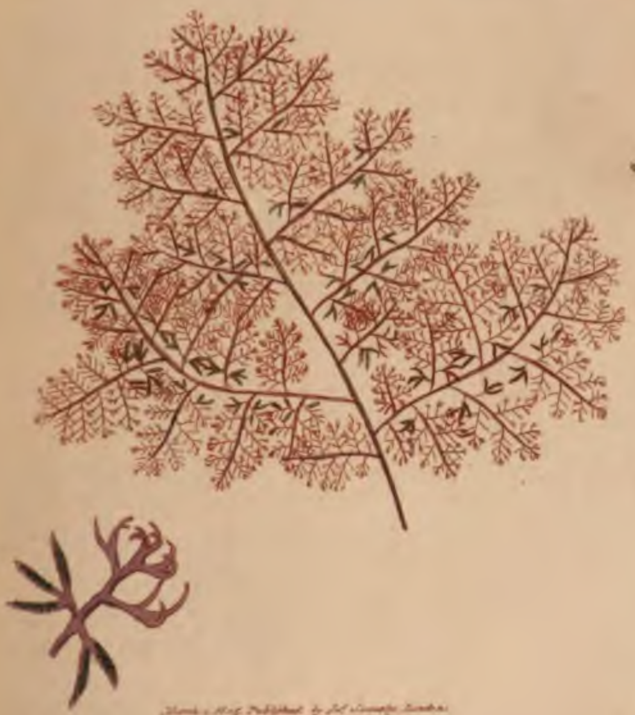
Spec. Char. Frond capillary, much branched. Branches and all their subdivisions alternate, rolled in at their points.

Syn. Fucus amphibius. *Huds.* 590. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 227. *Turn. Syn.* 391. *With. v.* 4. 116. *Hull.* 327. *Stackh. Ner. t.* 14.

F. scorpioides. *Huds. ed.* 1. 471. *Gmel. Fuc.* 135.

Fucoides erectum fruticuli specie, summitatibus inflexis. *Dill. in Raii Syn.* 38. *t.* 2. *f.* 6.

GROWS on rocks and stones on the sea shore about high-water mark, or in salt marshes; frequently, as Mr. Turner observes, attached to the roots and stems of other sea plants.



March 1. 1812 Published by Jas. Sowerby London.

87.

[1686]

FUCUS fruticulosus.
Little Shrubby Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

Spec. Char. Frond capillary, brown, bushy, obscurely jointed, alternately and repeatedly branched; the ultimate divisions acute. Tubercles lateral, sessile, roundish.

Syn. Fucus fruticulosus. *Wulf. in Jacq. Coll. v.* 3 159. *t.* 16. *f.* 1. *Turn. Syn.* 394.

Conferva nigra. *Huds.* 595? *With. v.* 4. 131? *Hull.* 331?

GATHERED on the Cornish coast by Mr. Turner and Mr. Sowerby. Our specimen was communicated by Mr. Woodward. It is said to grow on the stems of the larger *Fuci*, and to be annual. Mr. Turner is the only British author who has described this species, except the above synonym of Hudson and his copiers be right, for which we have no further authority than the agreement of his short description with our plant, which in such cases is scarcely satisfactory without a comparison of specimens.

From one callous root arise many bushy fronds about 3 inches high, capillary, cylindrical, or slightly compressed, of a dark brown, alternately and repeatedly pinnate, transversely corrugated as if obscurely jointed; the ultimate segments awl-shaped, divaricated, acute, often tipped, as in our specimen, with tufts of pale woolly fibres, observed by Mr. Turner on some other species. See the Introduction to his Synopsis, *p.* 18. The seeds are lodged in roundish, sessile, lateral tubercles, coloured like the frond, and situated about the upper branches.

1686.

Dec. 1. 1806. Published by Jas. Sowerby, London.

88.

FUCUS viridis.

Green Bushy Fucus.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in clustered tubercles, which burst at their summits.

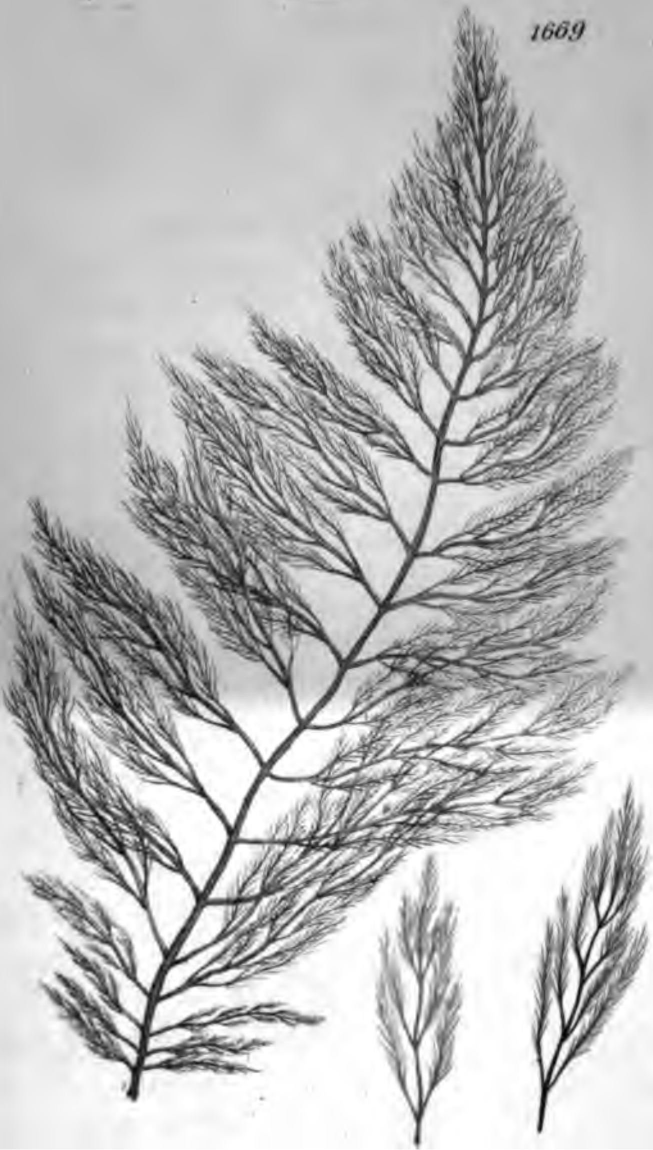
Spec. Char. Frond pinnate, repeatedly compound, thread-shaped. General and partial branches all opposite, crowded, capillary, acute.

Syn. Fucus viridis. *Fl. Dan. t.* 886. *Turn. Syn.* 397.

We have, at various times, been favoured with specimens of this rare Fucus from Yarmouth, by Mr. Turner and the Rev. G. R. Leathes. Sir T. Frankland has found it growing at Scarborough, from whence perhaps the plants occasionally cast up on the Norfolk coast may have been washed by the tides. This, according to Mr. Turner, happens in July and August, and it confirms his idea of its being an annual species.

Root a small callous knob. Frond 1 or 2 feet long, cylindrical, as thick as a small packthread, 3, 4 or 5 times compounded in an opposite pinnate manner; the branches all round, tapering, and the ultimate ones very fine. The fructification has not been detected. The colour is a fine tawny orange, which after a few minutes' exposure to the air turns to a pale verdigrise green. This is analogous to that of *F. ligulatus, t.* 1636, of which the original colour is, it seems, a bright orange, the green hue being assumed after it comes out of the water. Both species turn brownish by long keeping in fresh water.

1669



Nov 1.1806. Publish'd by Jas Sowerby, London.

ULVA pavonia.

Turkey-feather Laver.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

SPEC. CHAR. Frond membranous, flat, kidney-shaped, with a taper base. Seeds in transverse arched lines.

SYN. Ulva pavonia. *Linn. Syst. Nat. ed.* 12. *v.* 2. 719. *Huds.* 566. *With. v.* 4. 121. *Hull.* 311. *Lightf.* 966.

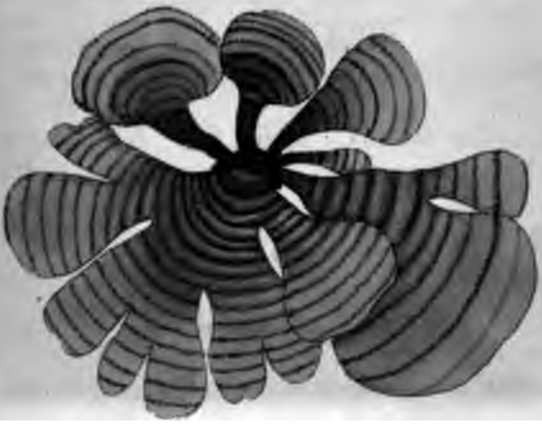
Fucus maritimus, gallo pavonis pennas referens. *Raii Syn.* 43. *Ellis's Corallines* 88. *t.* 33.

FOUND on submarine rocks and stones, chiefly on the southern coast of England, though it has been seen in Scotland. Our specimens were gathered at Weymouth by Mr. Bryer and Mr. Pilkington. We have received others from the harbour of Cadiz, where it is more plentiful than in England, by favour of Don Simon de Roxas Clemente, a learned Spaniard now travelling in the north of Africa in the dress and character of a Moor.

Several fronds grow from one central root, spreading circularly, of a kidney shape, undivided or lobed, of a membranous texture and light greenish brown colour. The seeds are thickly lodged in several brown arched lines, which run quite across each frond, and give the whole an elegantly striped appearance, justly compared to the feather of a turkey-cock.

Mr. Ellis has published a figure and description of this plant in his work on Corallines, not as believing it one of that tribe, but to shew its appearance under a microscope. His figure accords with what Mr. J. Sowerby has observed.

1276



Feb 1. 1804 Publiſhed by Jas Sowerby, London.

90.

ULVA atomaria.

Concentric-dotted Laver.

CRYPTOGAMIA Algæ.

Gen. Char. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

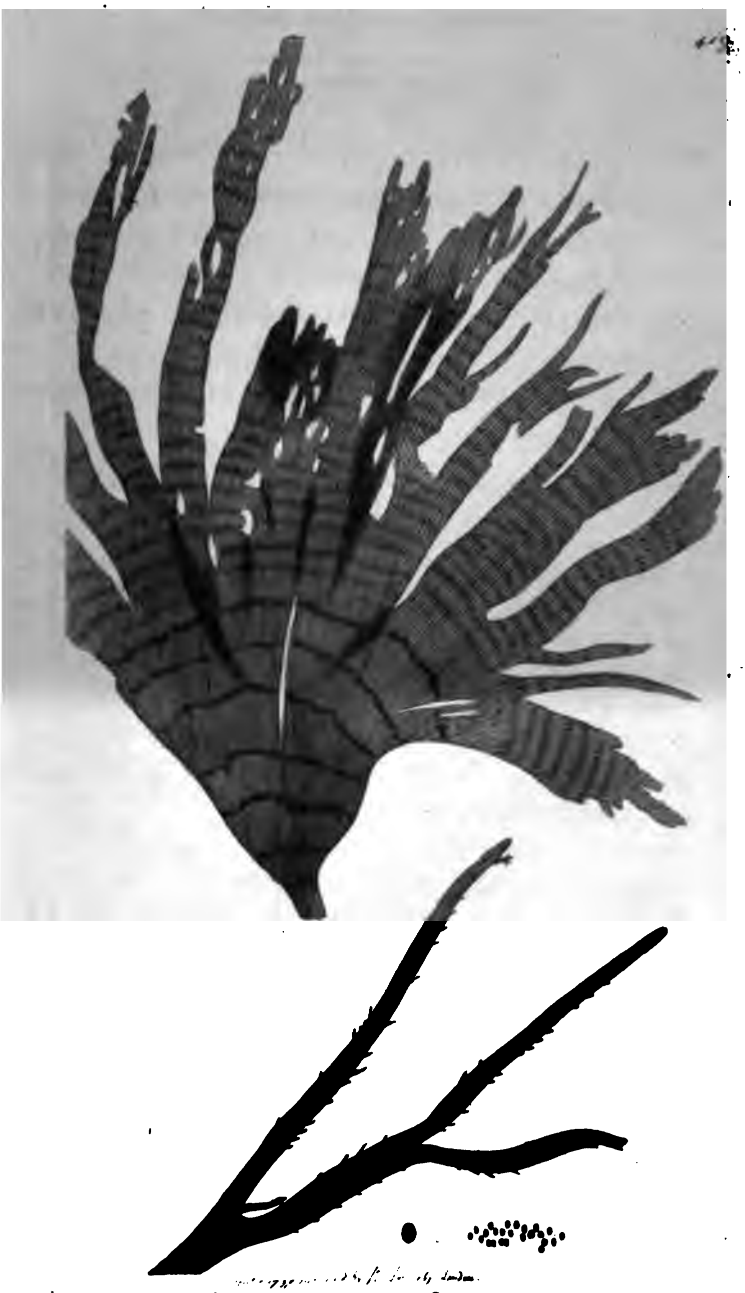
Spec. Char. Frond membranous, flat, dilated, palmate; its segments linear, slightly branched, and sometimes fringed.

Syn. Ulva atomaria. *Woodward in Tr. of Linn. Soc. v.* 3. 53.

Mr. Woodward has first published a description of this elegant sea-weed in the transactions of the Linnæan Society, but without a figure; and it is by his kind permission we are enabled to give a representation of it and the following, from his own specimens.

Mr. Lily Wigg, a most ingenious and accurate observer of nature, discovered this new species on the Yarmouth coast, washed up by the tide; nor do we know of its having been found any where else.

It seems to have been attached to the ground or rocks by a small dilated downy base, immediately above which the frond dilates into a wedge or fan shape, various in breadth, divided in a palmate manner (not down to the base) into various unequal linear, frequently branched, segments, terminating bluntly; sometimes entire and naked at the margin, sometimes fringed with minute teeth pointing upwards. The whole substance is thin and membranaceous, of an olive brown. The seeds are of a darker colour, very minute, and disposed somewhat irregularly in numerous transverse concentric lines or stripes, which give the plant a beautiful appearance.



[illegible] London.

91.

ULVA ligulata.

Laciniated Red Laver.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

SPEC. CHAR. Frond membranous, flat, branched: branches dilated, somewhat forked, with obtuse angles; terminated and fringed with strap-shaped segments.

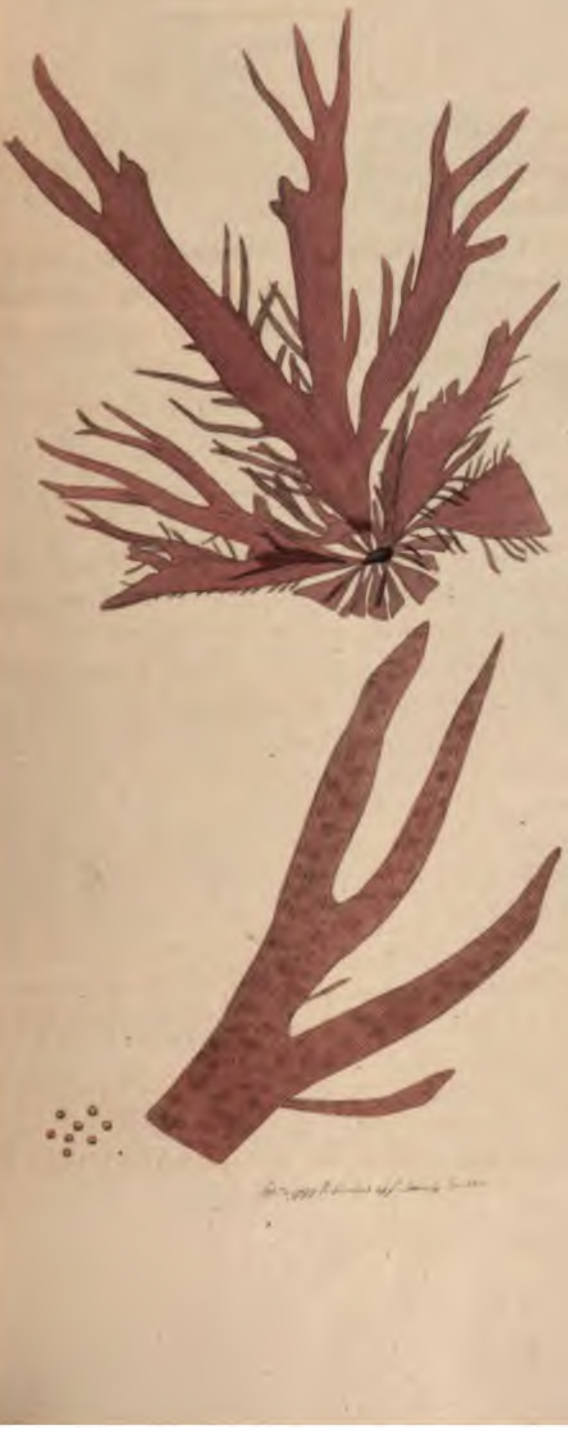
SYN. Ulva ligulata. *Woodward in Tr. of Lin. Soc.* v. 3. 54.

FOUND by Mr. Wigg on Yarmouth beach, cast up with the *Ulva atomaria*; but Mr. Woodward has since discovered it in a growing state on the rocks at Cromer.

The root is a small tubercle. Fronds clustered, each of them 5 or 6 inches high, dilated from a very slender base into a wedge-shaped figure, deeply cut into several unequal subdivided segments; the sinuses or *axillæ* of all the segments are obtuse, or rounded more or less. The ultimate divisions are linear, and somewhat acute, and the lower part of the frond principally is sometimes fringed with processes or leaves of a similar figure, various in size. The substance of the whole is membranous, varying in thickness, semipellucid, of a brightish red; the margin entire and smooth. Seeds very minute, scattered separately throughout the substance of the frond.

Mr. Woodward suspects this *Ulva* may have been confounded with some varieties of *Fucus ciliatus*, and, we may add, of *Fucus palmatus*, but its dispersed seeds make it an *Ulva*.

420.



[illegible]

92

[1551]

ULVA Lactuca.

Green Laver, or Oyster Green.

CRYPTOGAMIA Algæ.

Gen. Char. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

Spec. Char. Membranous, pellucid, palmate, proliferous, bright green; its segments narrowest at their lower part.

Syn. Ulva Lactuca. *Linn. Sp. Pl.* 1632. *Huds.* 566. *With.* v. 4. 125. *Hull.* 511. *Lightf.* 970. *Relh.* 480. *Roth. Catalect.* 206.

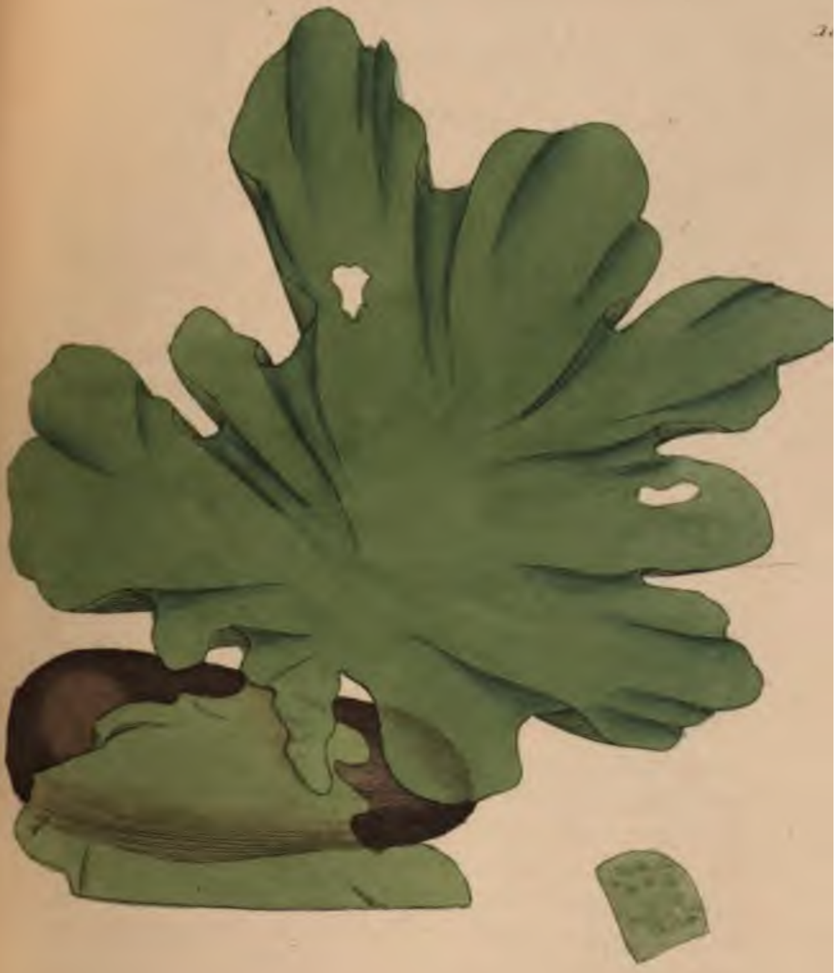
U. marina, lactucæ similis. *Raii Syn.* 62.

Tremella marina vulgaris, lactucæ similis. *Dill. Musc.* 42. t. 8. *f.* 1.

COMMON in the sea and about the mouths of large rivers, growing under water upon stones and shells. A supposed variety is found in fresh water.

It is an annual plant, and bears its fructification in the autumn. The fronds generally grow in clusters, fixed by a round tapering base, erect or spreading, simple, divided or proliferous, generally palmate, always dilated upwards and narrowest towards the base. The texture of the whole is uniform, membranous, thin and tender; the colour an uniform, bright, shining, [illegible] green. There are no ribs nor veins. The seeds are [illegible] confused, and very minute.

This seaweed has a salt and brackish flavour like most of its tribe. It has within a few years been introduced to fashionable tables, being stewed with lemon juice. It is esteemed wholesome [illegible] habits; but can scarcely be taken in sufficient quantity to do much good, without too strong an effect on the bowels.



June 1. 1809 Published by Jas. Sowerby London.

[2320]

ULVA bullosa.

Cellular Green Laver.

CRYPTOGAMIA Algæ.

Gen. Char. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

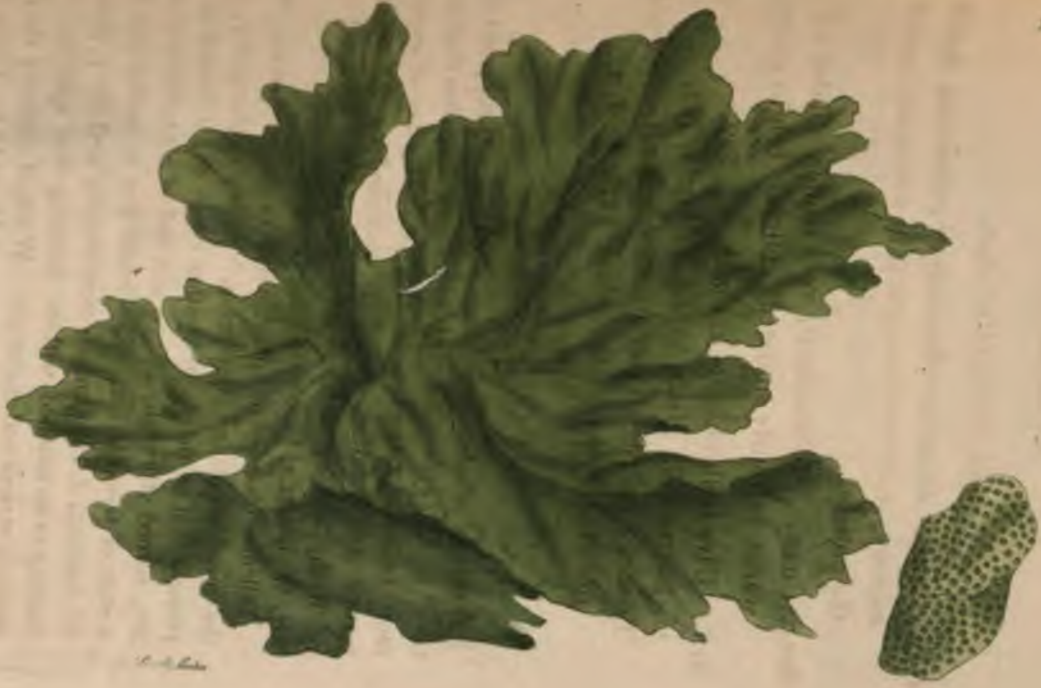
Spec. Char. Membranous, very tender, dilated upwards, variously sinuated, cellular, bright green.

Syn. Ulva bullosa. *Roth. Catal. v.* 3. 329.
U. Lactuca β. *Huds.* 567. *With. v.* 4. 123.
Tremella palustris, vulgari marinæ similis, sed minor et tenerior. *Dill. Musc.* 44. *t.* 8. *f.* 2.

To this we alluded in v. 22. p. 1551, as a "supposed variety" of *U. Lactuca,* not without a strong suspicion that they must be distinct species, differing in their place of growth, texture and duration, which is confirmed by the opinion of Roth, and by the specimens before us, collected by Mr. W. Borrer at Henfield, Sussex, last July.

Dillenius observed this plant in shallow stagnant waters, "in the meadows behind Newington," chiefly in the spring, and remarks that as the warm weather came on, it floated on the top, turned yellowish, and became full of air-bubbles as if in a state of fermentation. The whole is of a smaller size than *U. Lactuca, t.* 1551, much more slippery and slimy, scarcely bearing to be touched without breaking and spoiling. The shape is various and uncertain. When at maturity the frond becomes cellular, somewhat like a cabbage-leaf. Under a microscope it appears beautifully dotted, as if reticulated.

2590



94.

ULVA plantaginea.

Plantain-leaved Laver.

CRYPTOGAMIA Algæ.

Gen. Char. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

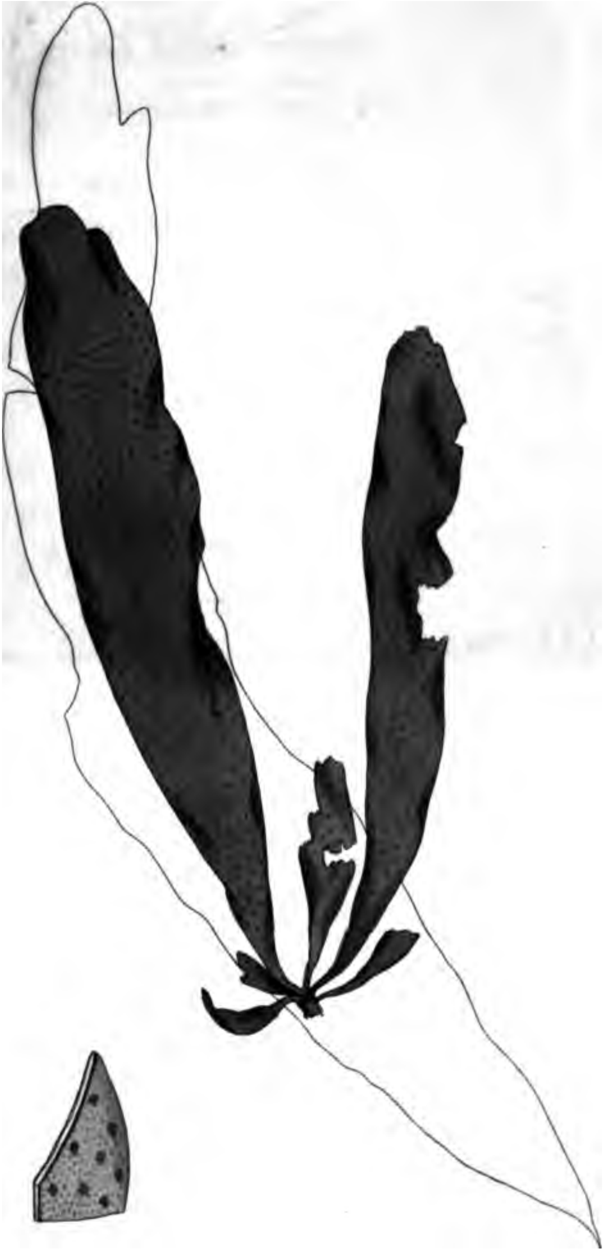
Spec. Char. Fronds several, membranous, simple, oblong, obtuse, flat, entire, tapering at the base, minutely warty, brown.

Syn. Ulva plantaginea. *Roth. Catal. fasc.* 2. 243. Tremella marina, calendulæ folio atro-virente et verrucoso. *Dill. Musc.* 46. *t.* 9. *f.* 4.

GATHERED by Mr. Turner on the Cromer coast, and by Mr. Borrer at Southwick, Sussex. Dillenius received it from Micheli, among whose unpublished plates, *t.* 34. *f.* 2, presented to us by his heir Mr. Targioni Tozzetti, is a very good figure of this plant, without a name.

From one small cartilaginous base arise several upright undivided fronds, from 3 to 6 or 8 inches long, of a very dull olive brown, oblong, obtuse, entire, flat, an inch broad, of a firm membranous texture, not adhering to paper in drying, its surface besprinkled with minute rather prominent warts. Dr. Roth and Mr. Turner observe that the fronds are very generally found perforated or eroded by some marine animals. The base of each is very much attenuated. In form this species considerably agrees with *U. Linza*, but differs in colour, flatness, and greater firmness of substance, as well as in its rough or warty surface. From *U. Lactuca*, *t.* 1551, with which Roth contrasts it, there can be no difficulty in distinguishing the plant before us.

2136



[illegible] Js. Sowerby London

95.

ULVA umbilicalis.

Peltate Laver.

CRYPTOGAMIA Algæ.

Gen. Char. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

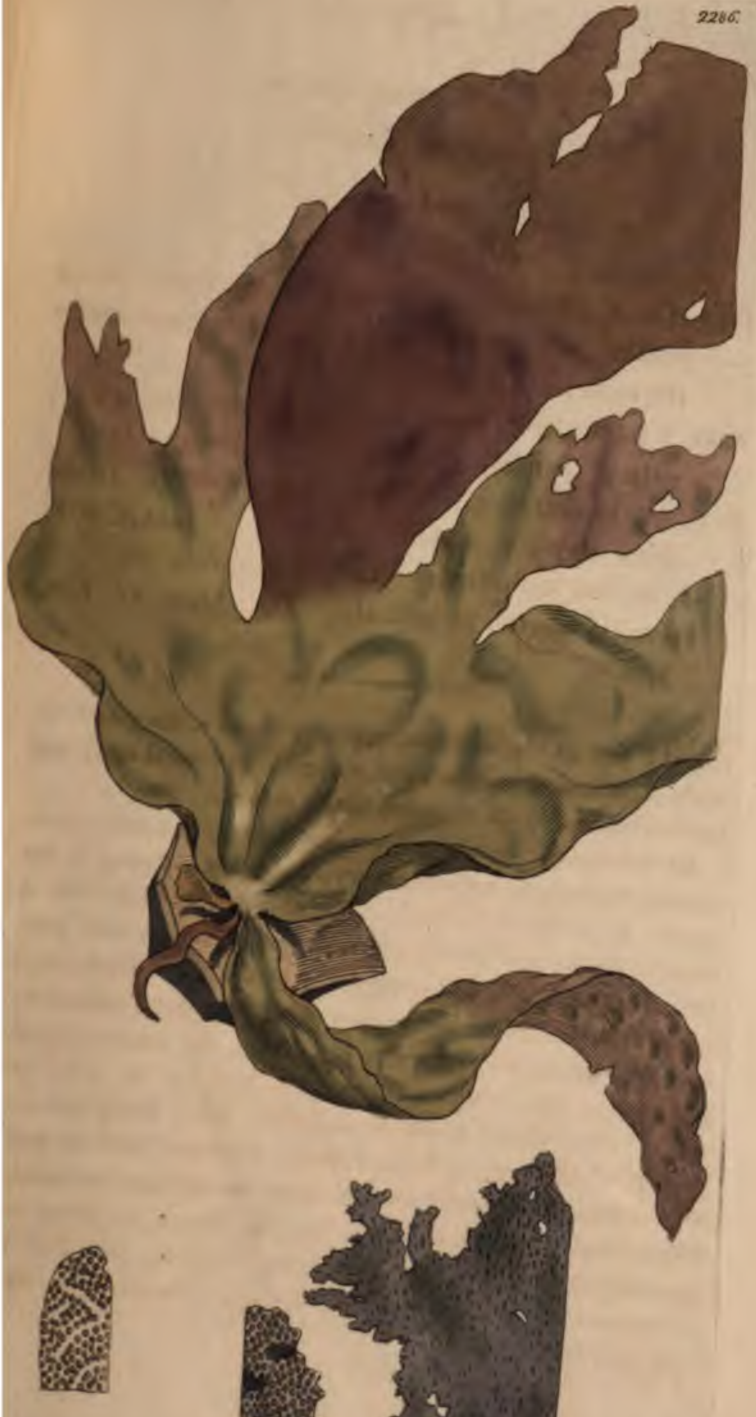
Spec. Char. Somewhat coriaceous, orbicular, sessile, peltate, spreading nearly flat, variously lobed.

Syn. Ulva umbilicalis. *Linn. Sp. Pl.* 1633. *Huds.* 567. *With. v.* 4. 121. *Hull.* 311. *Lightf.* 967.
U. marina umbilicata. *Dill. in Raii Syn.* 62.
Tremella marina umbilicata. *Dill. Musc.* 45. *t.* 8. *f.* 3.

NOT rare on the sea coast, where it grows solitary and dispersed, adhering to stones and rocks by its central root, and is often thrown up on the more sandy shores.

Its substance, membranous when young, becomes considerably thickened, and almost coriaceous, not adhering to the papers in which it is dried. The colour is purplish with a tinge of brown and green; sometimes altogether a dull purple; but the surface is shining and very smooth. Each plant is about a span wide, often much more, somewhat orbicular, variously cut or lobed even to the centre, the edges crisped and wavy, the substance frequently torn by the wind or waves. The whole, under a magnifier, being finely and regularly cellular within, looks dotted. Here and there are seen a few seeds, dispersed in small clusters, darker than the frond. These Mr. Turner has sent us. Mr. W. Borrer, to whom we are obliged for the larger specimen, observes that Roth's *U. purpurea, Catalect. v.* 1. 209. *t.* 6. *f.* 1, is merely an oblong variety of this.

2286.



publishd by Jas. Sowerby London

ULVA furcellata.

Reddish Forked Laver.

CRYPTOGAMIA Algæ.

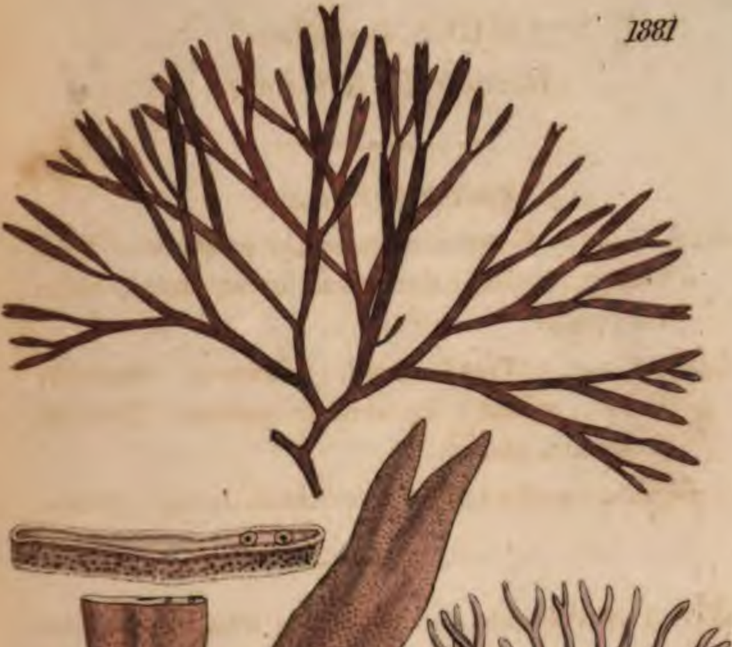
Gen. Char. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

Spec. Char. Frond round, gelatinous, repeatedly forked, reddish; its ultimate segments flattened, lanceolate, cloven.

Syn. Ulva furcellata. *Turner in Schrad. Journ. v.* 3. 301.

Mr. TURNER, who first found this *Ulva* on submarine rocks and stones at Sheringham, Norfolk, and communicated a description and figure of it to the Physical Society of Gottingen, which are published in Dr. Schrader's *Journal,*

1881



May 1.1808. Publishd by Jas. Sowerby London.

97.

ULVA multifida.

Laciniated Brown Laver.

CRYPTOGAMIA Algæ.

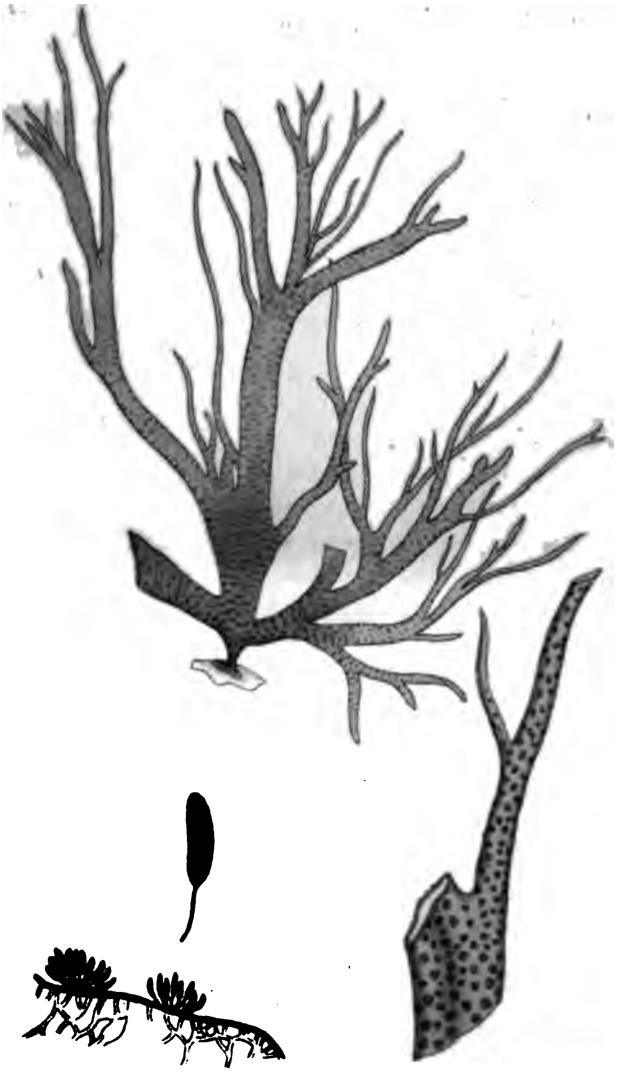
Gen. Char. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

Spec. Char. Frond somewhat cartilaginous, brown, compressed, repeatedly branched, somewhat palmate. Seeds irregularly scattered. Root smooth.

A NONDESCRIPT species, gathered by Mr. Turner, August 31, 1804, on the beach at Yarmouth, where however it is of very rare occurrence. We are obliged to that gentleman for allowing us to make a drawing from his own specimen.

Root a small smooth callous disk, not woolly. Frond olive-brown 4 or 5 inches high, thick and leathery rather than membranous, compressed, repeatedly branched or fingered, scarcely palmate; the segments spreading, linear, various in length and breadth. The whole is quite destitute of concentric lines. The seeds are thickly and irregularly scattered over the frond in small round clusters. We are not sure that they are lodged under the cuticle, or if originally so, they are here perhaps in a viviparous state. They evidently project so as to give a roughness to the frond, and when highly magnified appear like little tufts of oblong stalked capsules. Are these a young progeny? or are they really capsules, and the plant rather a *Fucus* than an *Ulva?* We take the liberty of suggesting our doubts, though we follow the opinion of the able botanist to whom we are indebted for this communication, and who is in this tribe of such peculiar authority.

1913



July 1.1808. Publish'd by Jas Sowerby London.

ULVA montana.

Red Mountain Laver.

CRYPTOGAMIA Algæ.

Gen. Char. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

Spec. Char. Frond leathery, dark red, of numerous, ascending, rounded, [illegible], finely granulated lobes.

Syn. Ulva montana. *Lightf.* 973. *Huds.* 652. *With.* [illegible]

WE have authentic specimens, from the Rev. Dr. Burgess and his son, of this curious plant from the hills of Dumfriesshire. Lightfoot, who alone has described it, for other authors only copy him, says it grows on the ground, amongst grass and moss, on the sides of mountains in Skye, Ross-shire, &c., and that "the Highlanders wash it, and rub it between their hands with some water, so as to make a thin pulpy mixture, and with this they purge their calves." It is called Mountain Dulse, and has the smell, with much of the appearance, of *Fucus palmatus*, *t.* 1306, though sufficiently

2i

[illegible] London

77

ULVA rupestris.

Broad Rock Laver.

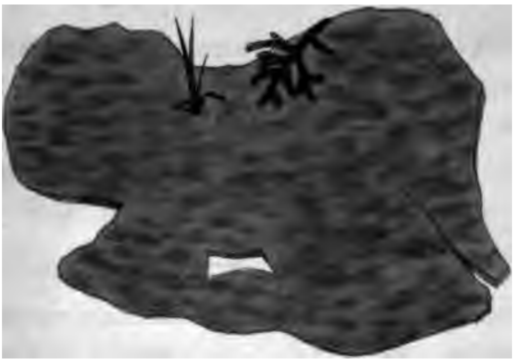
CRYPTOGAMIA Algæ.

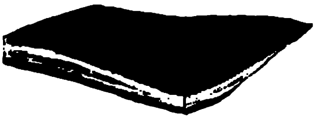
Gen. Char. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

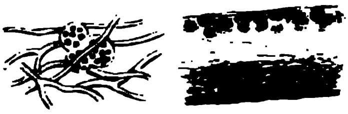
Spec. Char. Frond leathery, depressed, very wide, indeterminate, smooth and slippery, dull red.

THIS singular nondescript never came under my observation but once, nor can I meet with any botanist who is acquainted with it. The plate represents a small fragment of the frond, which was 2 or 3 feet wide, and spread like a piece of very wet leather, of a jagged indeterminate outline, over the nearly upright face of a rock, bathed with a perpetual trickling rill, at some distance above Tylogé bridge in the "new walk" in Mr. Johnes's grounds at Hafod, Cardiganshire; as mentioned

2194.







[illegible] published by Jas. Sowerby London

100-

ULVA dichotoma.

Green dichotomous Laver.

CRYPTOGAMIA Algæ.

Gen. Char. *Frond* membranous or gelatinous. *Seeds* ſolitary, ſcattered throughout its ſubſtance, under the cuticle.

Spec. Char. Frond membranous, flat, dichotomous, reticulated, pale-green.

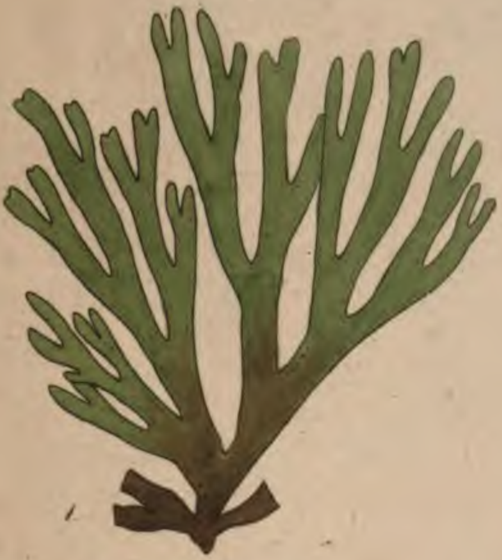
Syn. Ulva dichotoma. *Lightf.* 975. *t.* 34. *Hudſ.* 568. *With. v.* 4. 124. *Hull.* 312.

Fucus membranaceus dichotomus gramineus. *Raii Syn.* 45. Hudſ.

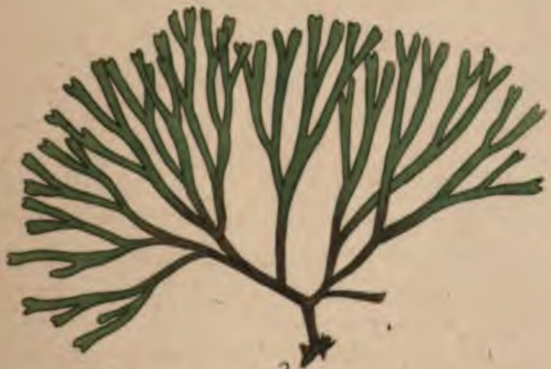
THE beſt account of the *Ulva* before us is given by Mr. Lightfoot, who gueſſed it to be U. *dichotoma* of the firſt edition of the *Flora Anglica*, and his conjecture is confirmed by Mr. Hudſon in the ſecond edition. The ſynonym of Ray ſtands on the authority of the writer laſt mentioned, who perhaps had ſeen named ſpecimens in ſome old herbarium; otherwiſe there are but ſlender materials to ſupport it.

Our ſpecimens were gathered by Mr. Turner and Mr. Sowerby on the Corniſh coaſt laſt ſummer. The plant is of a flat thin texture, curiouſly reticulated throughout its ſubſtance, ſomewhat like that kind of coralline called *Fluſtra*. The frond is repeatedly dichotomous, or forked, linear, entire, blunt and generally notched at the extremities. Fig. 1 ſhows its moſt general breadth; fig. 2 is a narrower variety, not much leſs common. The ſeeds are blackiſh, ſcattered through the ſubſtance of the frond. Mr. Sowerby has moreover obſerved a ſeries of little bladders between theſe ſeeds and the margin of the leaf. What their uſe or nature is we preſume not to determine.

774



1.



2.

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101.

ULVA compressa.
Compressed Laver.

CRYPTOGAMIA Algæ.

Gen. Char. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

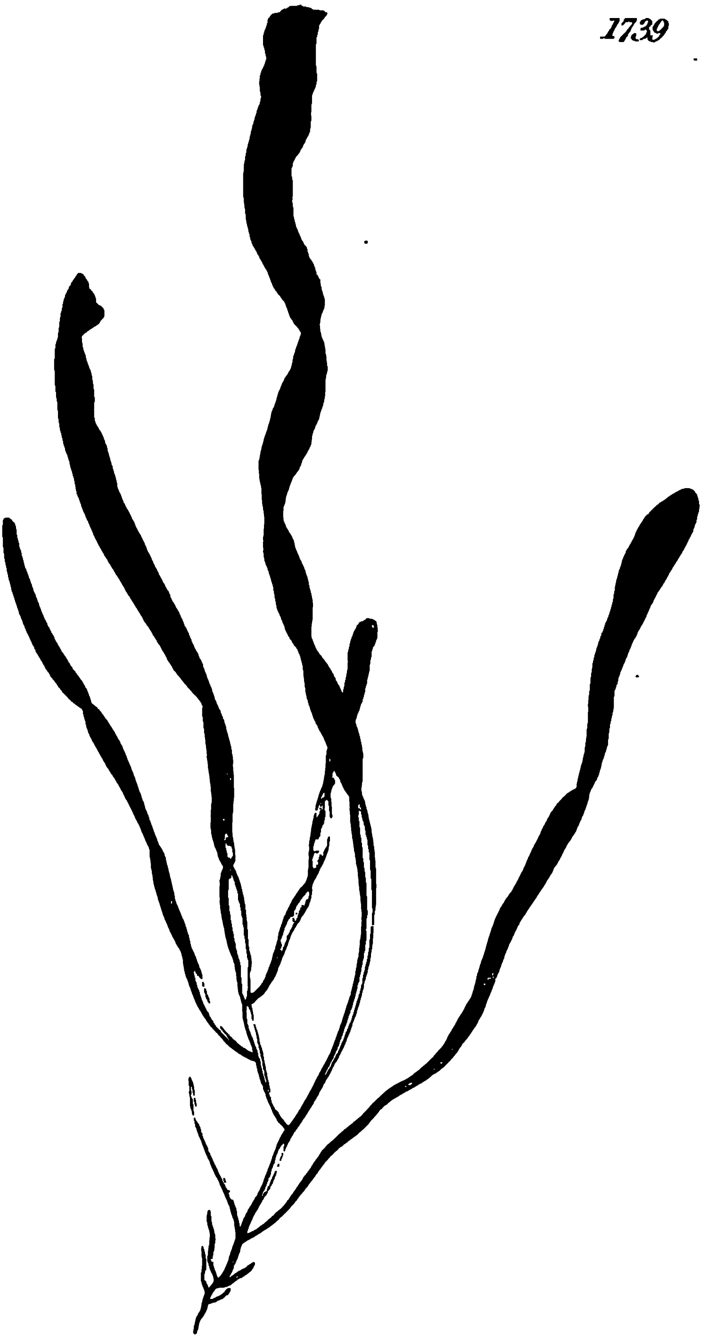
Spec. Char. Frond tubular, more or less branched, compressed, irregularly constricted, green; the branches elongated.

Syn. Ulva compressa. *Linn. Sp. Pl.* 1632. *Huds.* 569. *With. v.* 4. 126. *Hull.* 311. *Relh.* 480.
U. marina tenuissima et compressa. *Raii Syn.* 63.
Tremella marina tenuissima et compressa. *Dill. Musc.* 48. *t.* 9, 10. *f.* 8.
Conferva compressa. *Roth. Catal. fasc.* 1. 161.

C[illegible] marine rocks, stones and posts, as well as [illegible] and about the mouths of rivers, at all [illegible]

[illegible] tufts, and [illegible] slender at the base, [illegible] the branches being greatly en-[illegible] compressed, constricted here and [illegible] when perfect, but [illegible] The colour is green, [illegible] been [illegible] an [illegible] in [illegible] these [illegible] be [illegible]

1739



Ma[illegible] Published by Jas Sowerby, London

102.

ULVA ramulosa.

Green Sharp-branched Laver.

CRYPTOGAMIA Algæ.

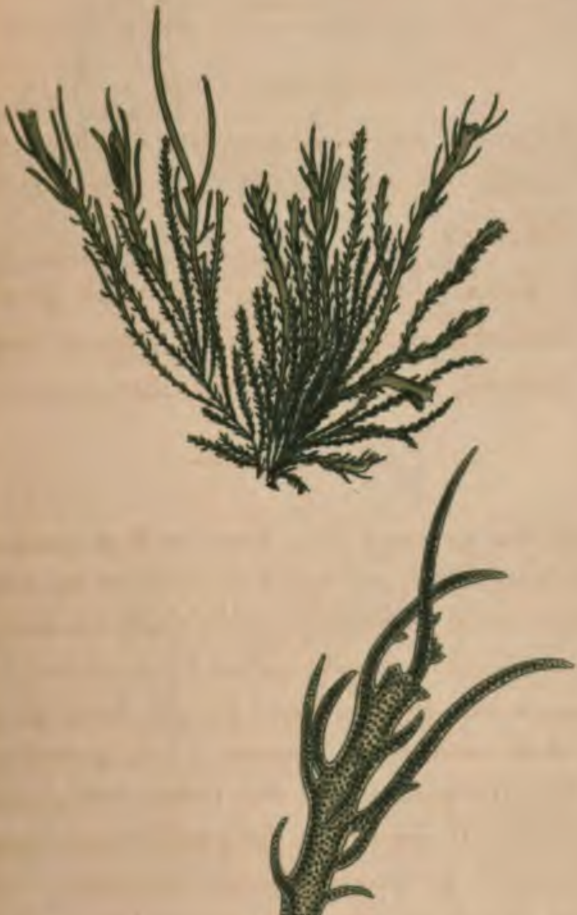
Gen. Char. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

Spec. Char. Frond tubular, very much branched, somewhat compressed, green; ultimate branches scattered, extremely numerous, sharp-pointed.

THIS new species of *Ulva*, found by Miss Hutchins in Bantry bay, Ireland, was made known to us by Mr. Turner.

The fronds are numerous, repeatedly subdivided, beset with innumerable short scattered branches, various in size, but all agreeing in their sharp awl-shaped form, in which they differ from all the varieties of *U. compressa*, *t.* 1739, some of which are very much branched, but their terminations are obtuse. The colour of *U. ramulosa* is a fine green, its surface appearing under the microscope beautifully reticulated; or rather besprinkled with numerous dots, which we presume are the seeds. Internally it is tubular, and its substance is membranous approaching to gelatinous.

2137.



Ja 1 1810 published by Jas Sowerby London.

103.

ULVA purpuraſcens.

Purpliſh Laver.

CRYPTOGAMIA Algæ.

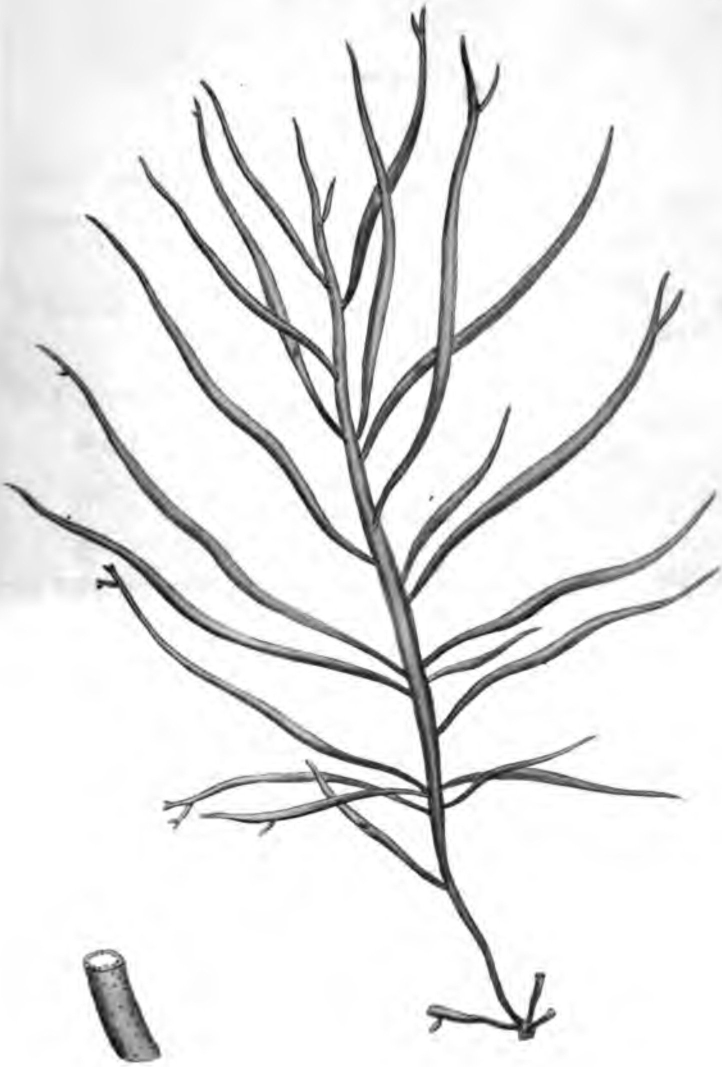
Gen. Char. *Frond* membranous or gelatinous. *Seeds* ſolitary, ſcattered throughout its ſubſtance, under the cuticle.

Spec. Char. Tubular, branched, roundiſh. Branches moſtly oppoſite, ſimple, acute.

Syn. Ulva purpuraſcens. *Hudſ.* 569. *With. v.* 4. 126. *Hull.* 312. *Woodw. Tr. of Linn. Soc. v.* 3. 52.

Good ſpecimens of this *Ulva* in fructification were gathered at Falmouth by Mr. D. Turner and Mr. Sowerby,

641.



104.

U L V A fiſtuloſa.

Pipe Laver.

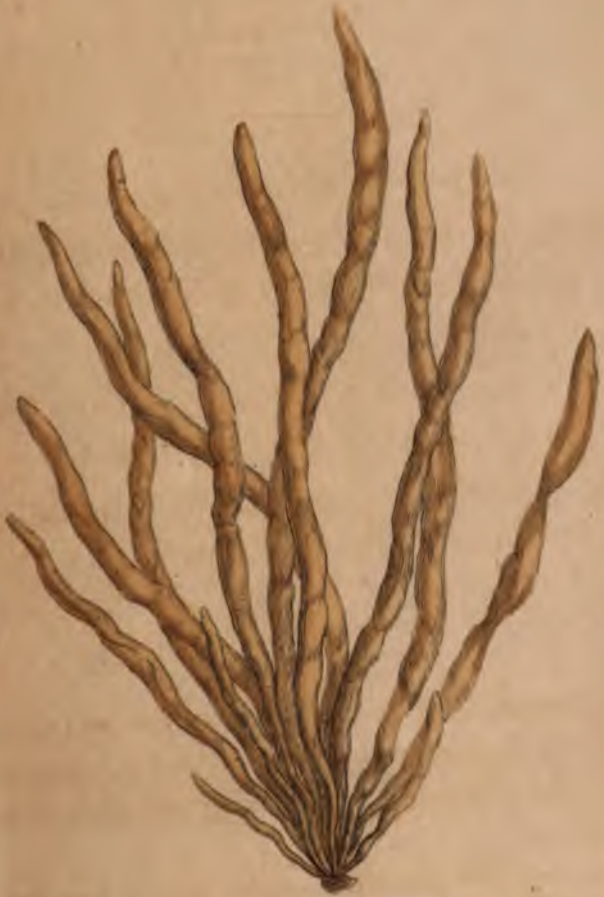
CRYPTOGAMIA Algæ.

Gen. Char. *Frond* membranous or gelatinous. *Seeds* ſolitary, ſcattered throughout its ſubſtance, under the cuticle.

Spec. Char. Gelatinous, tubular, uniform, ſimple, bluntiſh, a little zigzag, yellowiſh brown.

Syn. Ulva fiſtuloſa. *Hudſ.* 569. *With. v.* 4. 125. *Hull.* 313. *Woodw. Tr. of Linn. Soc. v.* 3. 52.

642



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105.

ULVA Turneri.

Reticulated Laver.

CRYPTOGAMIA Algæ.

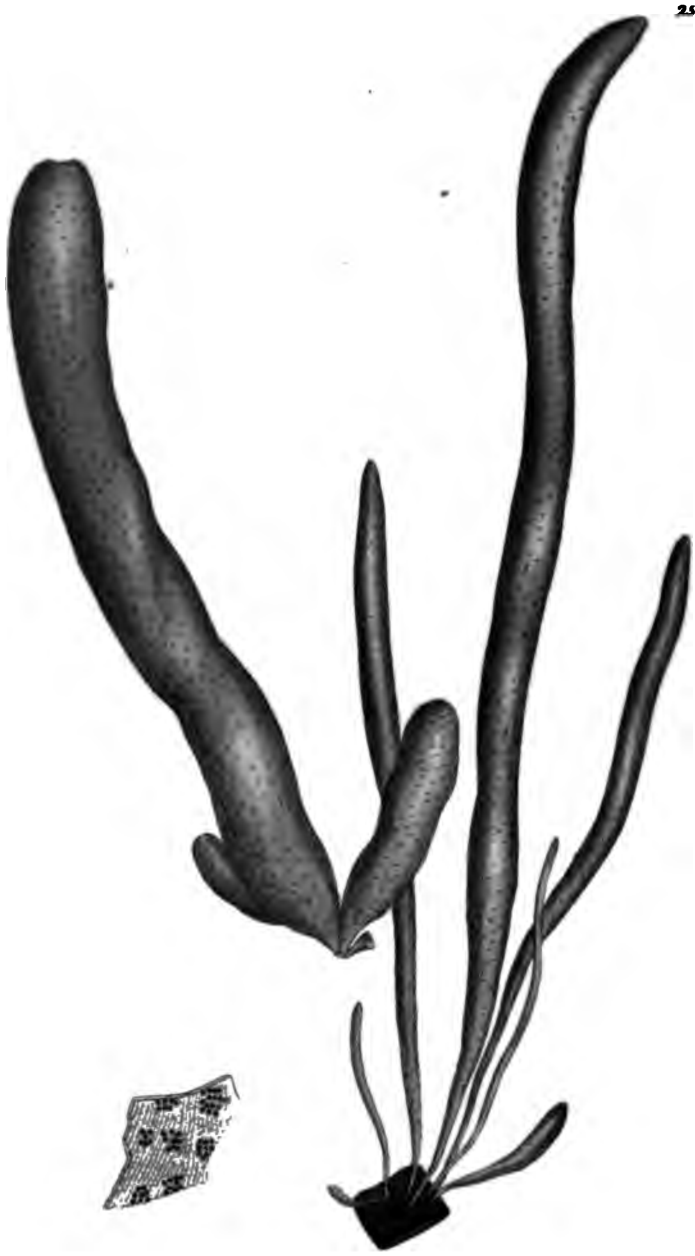
Gen. Char. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

Spec. Char. Membranous, tubular, simple, bluntish, brown, finely reticulated. Seeds in little clusters.

Found by Miss Hutchins at Bantry bay, and by Mr. W. Borrer on the Sussex coast. Mr. Turner sent it to Mr. Dillwyn, who gave it the above name, in an essay, which, as we are informed, he has long been preparing, upon this genus.

Several fronds grow together, bearing a considerable resemblance to *U. fistulosa, t.* 642, in general aspect and colour, being simple, tubular, hollow, tapering at the base, obtuse at the summit; their substance thin and rather membranous. An essential difference however consists in the *U. Turneri* being throughout of a fine reticulated structure, compared by Mr. Turner to that of the *Conferva umbilicata* of the late Colonel Velley, *Tr. of Linn. Soc. v.* 5. 169. *t.* 7. The seeds are dark brown, collected together in small spots, over the whole frond.—Another plant, nearly akin to these two, is *Ulva stellata, Wulf. in Jacq. Coll. v.* 1. 351, which is *Lichenoides gelatinosum tenue reticulatum, Dill. Musc.* 138. *t.* 19. *f.* 21.

2570



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106.

U L V A diaphana.

Pellucid Laver.

CRYPTOGAMIA Algæ.

Gen. Char. *Frond* membranous or gelatinous, with the *ſeeds* ſcattered through its ſubſtance. *Woodward.*

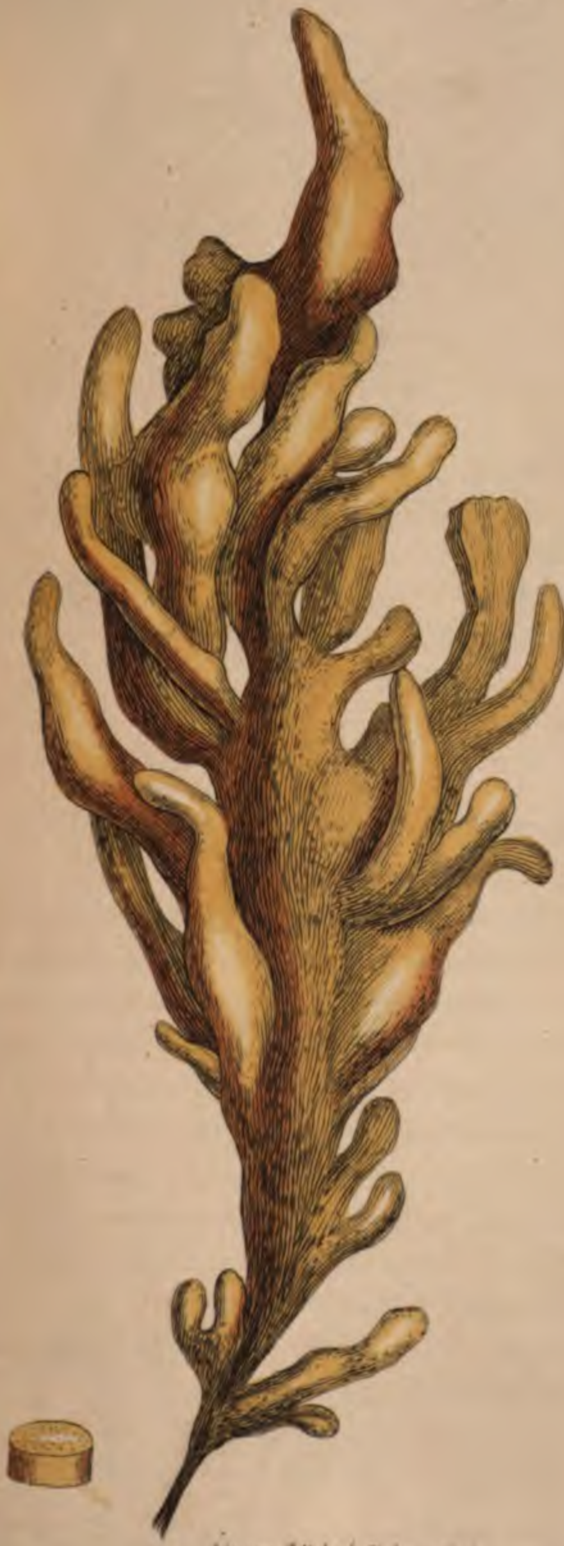
Spec. Char. Gelatinous, pale yellowiſh, pellucid, ſomewhat cylindrical, with numerous branches of various ſizes.

Syn. Ulva diaphana. *Hudſ. Fl. An.* 570. *With. Bot. Arr. v.* 3. 232.

Alcyonium gelatinoſum. *Linn. Syſt. Nat. v.* 1. 1295.

Fucus ſpongioſus nodoſus. *Raii Syn.* 49.

THIS ſingular production occurs now and then on the



July 1. 1795 Publish'd by J.s Sowerby Lond.

ULVA defracta.

Broken Laver.

CRYPTOGAMIA Algæ.

Gen. Char. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

Spec. Char. Frond thread-shaped, unbranched, elastic, viscid, pellucid, with pale red dots.

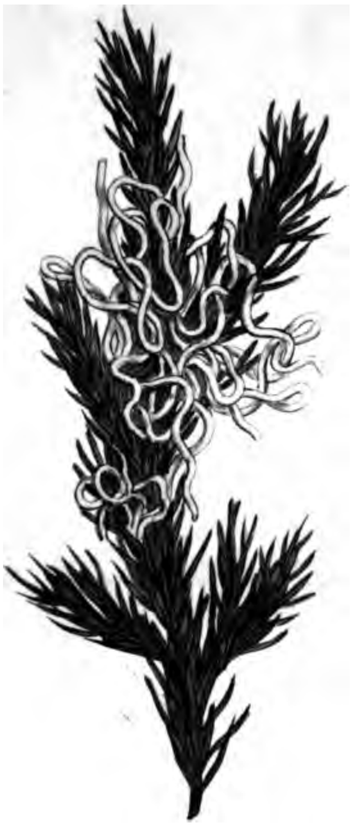
Syn. Ulva defracta. *With. v.* 4. 124. *t.* 18. *Hull.* 313.

FOUND on the eastern coast of Scotland by our liberal correspondent James Brodie, Esq.

We can add little to the description in Withering from that excellent observer Colonel Velley, who discovered this species on the beach at Weymouth at low water, and whose melancholy fate we have now to deplore. Our specimens grew entangled upon *Fuci* and *Confervæ*, twisted together like worms, and are simple, cylindrical, bluntish, very viscid when fresh, adhering to each other when dry. They are very pale and pellucid, sprinkled all over with blush-coloured dots, which seem to contain the seeds, and which Colonel Velley found to turn afterwards to an orange hue.

The fronds vary from 2 or 3 to 12 inches in length, and are about 1 eighth of an inch in diameter.

1626



July 1 1806 Published by Jas. Sowerby London.

108.

ULVA rubra.
Red Laver.

CRYPTOGAMIA Algæ.

Gen. Char. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

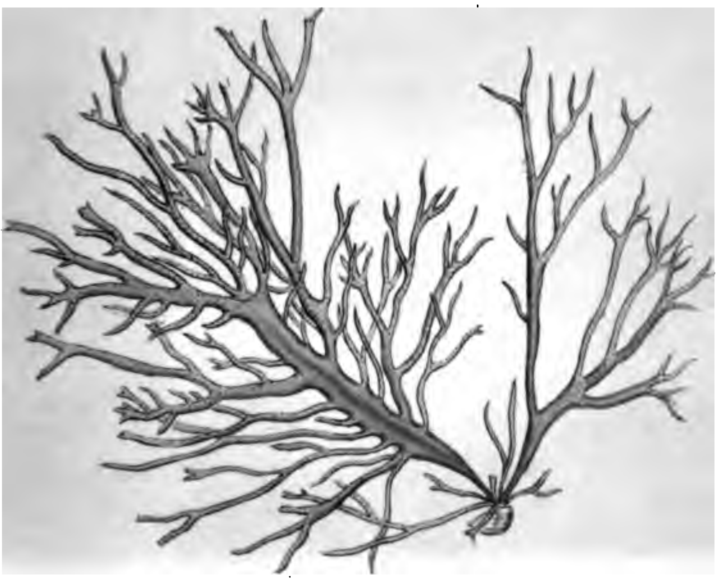
Spec. Char. Frond gelatinous, much branched, thread-shaped, somewhat flattened, red.

Syn. Ulva rubra. *Huds.* 571. *With. v.* 4. 126. *Hull.* 312.

OUR figure of this rare *Ulva* is taken from a fine specimen in the possession of Mr. Edward Forster, which was bought at the sale of the late Mr. Hudson, the only original author who has described the species. It was found on stones in the sea at Christ-church, Hampshire.

The fronds grow from a small callous root, and are from an inch and half to 3 inches high, taper at the base, much branched and dilated upwards, solid, cylindrical, but somewhat flattened in the broadest parts. The branches are mostly alternate, elongated, very irregularly subdivided; their segments rather acute than otherwise. The colour of the whole is a tawny or dullish red, the substance gelatinous. The seeds are scattered over the whole in round dark-coloured dots.

1027



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169.

ULVA plumosa.

Feathered Laver.

CRYPTOGAMIA Algæ.

Gen. Char. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

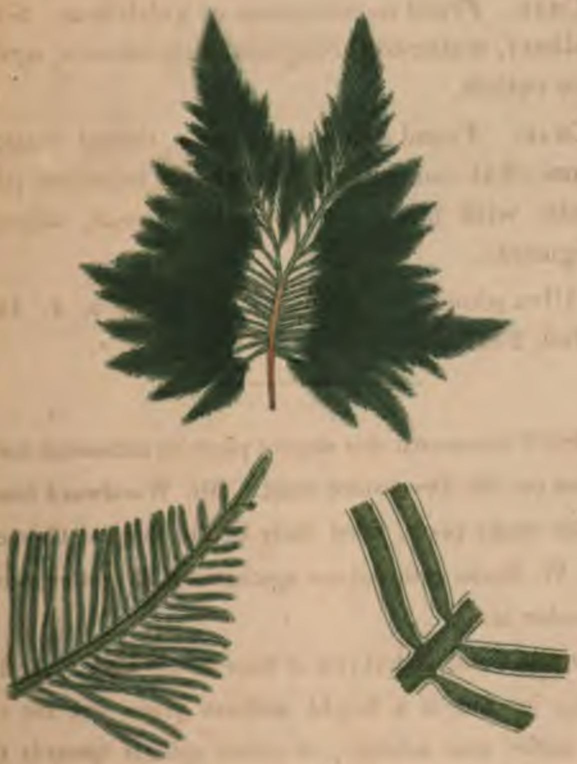
Spec. Char. Frond gelatinous, green, thread-shaped, somewhat compressed, branched; branches pinnate, with numerous, parallel, linear, shining segments.

Syn. Ulva plumosa. *Huds.* 571. *With.* v. 4. 126. *Hull.* 313.

HUDSON discovered this elegant plant on submarine rocks and stones on the Devonshire coast. Mr. Woodward found it in little rocky pools, filled daily by the tide, at Cromer; and Mr. W. Borrer gathered our specimens at Brighthelmstone in September last.

The whole frond is but two or three inches high. At first gathering, its hue is a bright uniform green, but the colouring matter soon subsides, or rather collects towards the skin, leaving the central part vacant and pellucid. Several principal branches are sent off by the main stem, and these are elegantly pinnated, with thick-set linear segments, or leaflets, in their upper part, the lower being simple and naked, like the quill of the beautiful feather they thus compose. Nothing is distinctly known of the fructification.

2375



[illegible] published by Js. Sowerby London.

[2583]

ULVA protuberans.

Prominent-seeded Laver.

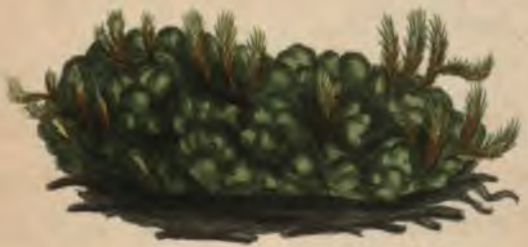
CRYPTOGAMIA Algæ.

Gen. Char. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

Spec. Char. Gelatinous, thick, angular, green. Seeds elliptical, at length prominent and deciduous.

THIS extraordinary production was discovered growing among

2583



[illegible] published by Jas. Sowerby London.

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111.

CONFERVA dichotoma.

Forked Conferva.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in round, ſolitary, cloſed tubercles, projecting from the frond, but united with it.

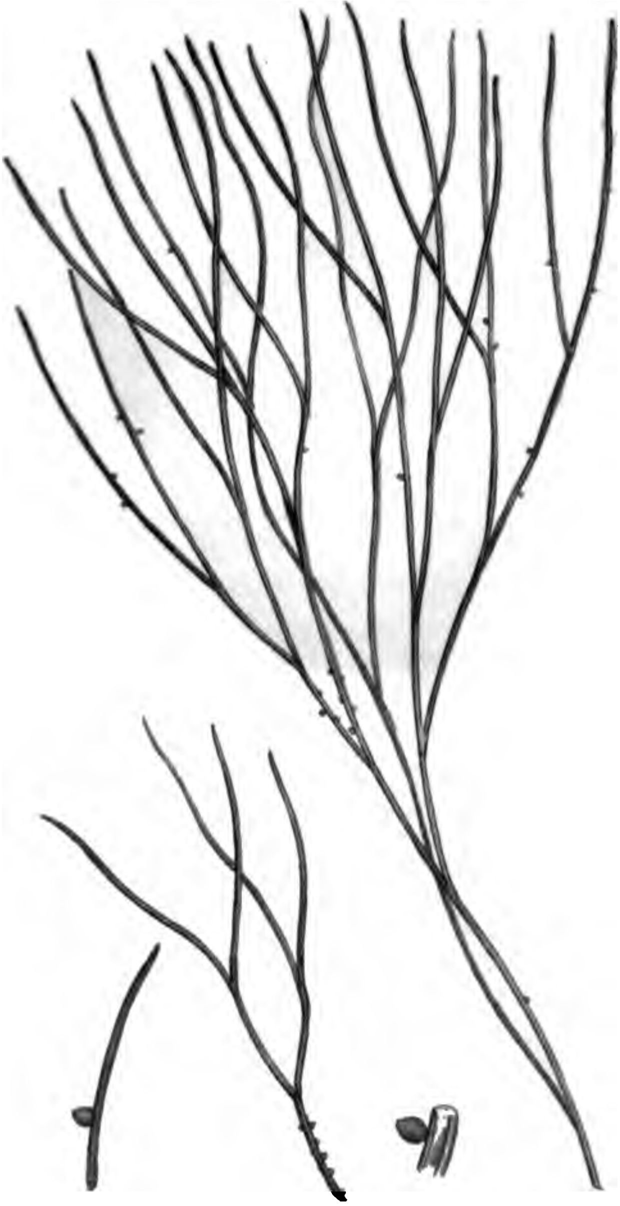
Spec. Char. Green, thread-ſhaped, hollow, repeatedly forked, jointed here and there. Capſules green, elliptical.

Syn. Conferva dichotoma. *Linn. Sp. Pl.* 1635. *Hudſ.* 593. *With. v.* 4. 129. *Hull.* 330.
C. dichotoma, ſetis porcinis ſimilis. *Dill. Muſc.* 17. *t.* 3. *f.* 9.
C. Plinii, ſetis porcinis ſimilis. *Dill. in Raii Syn.* 58.

FOUND in ditches near Yarmouth laſt April by Mr. D. Turner. The plant itſelf is far from common, and the fructification has never before been obſerved, either in this or (as far as we know) any other capillary freſh-water *Conferva*.

The whole plant is of a paliſh graſs-green, ſmooth, and pellucid. Its ſtems grow in denſe cluſters, erect (according to the obſervation of Dillenius), and are repeatedly forked, of an equal thickneſs throughout, bluntiſh at the top, hollow, conſiſting of a thin green membrane enveloping a darker granulated ſcattered pulp. The cavity is here and there divided by tranſverſe *ſepta*, and a little contracted at thoſe parts, giving the ſtem and branches an irregularly jointed appearance, which Dillenius does not mention. Capſules ſcattered, lateral, ſeſſile, elliptical, ſcarcely ſo long as the diameter of the branch, of the texture and colour of the ſtem. We have not diſcovered any ſeeds, inſomuch that Mr. Sowerby was led to ſuſpect theſe capſules might be extraneous bodies, perhaps eggs of ſome animal. I have, on the other hand, a ſuſpicion that the plant may rather belong to *Chara*, the ſtructure of its ſtem, eſpecially its joints, being exactly the ſame as in *C. flexilis*, and the capſule not unlike the fruit of that genus. The anthera however remains unknown.

938



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CONFERVA myochrous.
Alpine Mouse-skin Conferva.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in round, solitary, closed tubercles, projecting from the frond, but united with it.

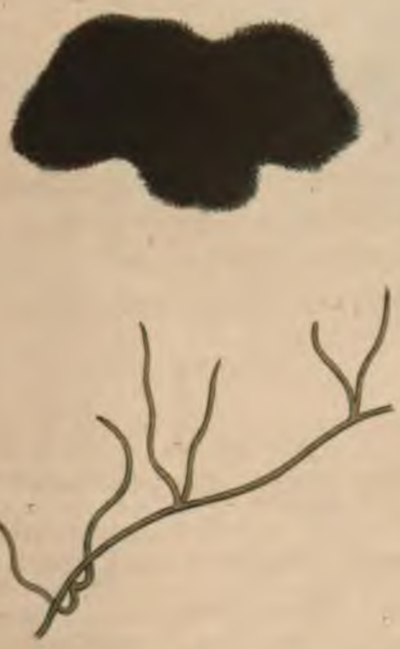
Spec. Char. Brown. Filaments densely entangled, branched, scarcely jointed; the branches simple, in pairs, incurved, mostly leaning one way. Joints imperceptible.

Syn. Conferva myochrous. *Dillw. Brit. Conf. t.* 19.

To Mr. Turner we are entirely obliged for our knowledge of this Conferva, as well as for the specimens we have drawn. He found it abundantly on stones in the alpine torrents of Snowdon, and in the vale of Beddgelert. He describes it as "matting the stones, often to a considerable extent, with a velvetty covering three or four lines in thickness, which, when taken out of the water, might aptly be compared to the skin of a mouse. Its colour was a dark glossy brown; its substance soft to the touch; its filaments so closely matted together, as to form almost an inseparable mass." Mr. Turner adds that the filaments were seldom more than half an inch long, and that he found no root. Some of them are simple, others branched, (as in our figure,) with pairs of simple incurved pointed branches, generally leaning one way. The branches and filaments are as "fine as the finest wool. There were in some specimens faint appearances of *septa*, but they were no where so evident as to warrant the inserting them in the figure." Such are the particulars communicated by Mr. Turner to Mr. Dillwyn.

Mr. Sowerby has found nothing like joints or septa, nor has any fructification been seen. The former only, in general, are our guide to the genus *Conferva*. In the present instance we have only a general similitude to assist us, but there is no reason to mistrust it.

1555



Feby 1. 1806. Published by Jas Sowerby London

113.

CONFERVA comoides.

Hair-brown Tufted Conferva.

CRYPTOGAMIA Algæ.

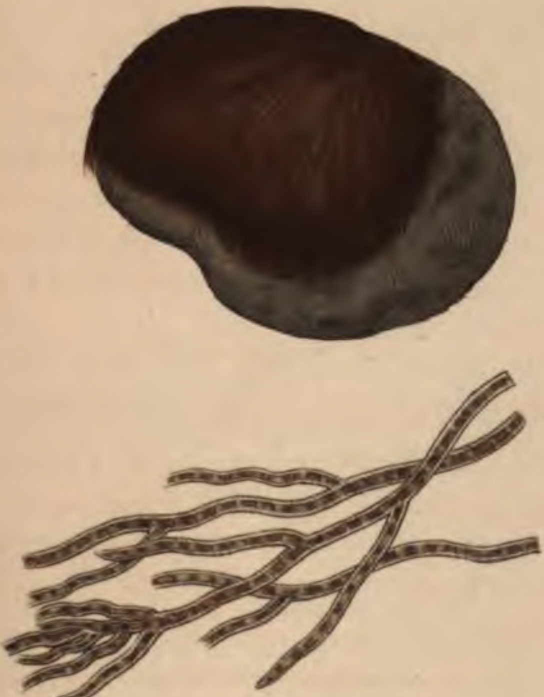
Gen. Char. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

Spec. Char. Purplish brown. Filaments capillary, branched, zigzag, very obscurely jointed. Branches scattered, sharp-pointed, but little spreading.

Syn. Conferva comoides. *Dillw. Conf. t.* 27.

Sent from Yarmouth by Mr. W. Borrer in October last. It is said by Mr. Dillwyn, the only writer who has given any account of it, to be common on our sea shores, growing on other sea-weeds, or on stones, “ frequently so covering the “ round pebbles which abound among the rocks with its “ slender hair-like tufts, lying one over the other, as to give “ them a striking resemblance to the head of an infant.” The filaments are very uniform in thickness, always zigzag or undulated, not straight, their joints scarcely discernible. The branches are rather distant, scattered, coming off at very acute angles, and each terminating in a sharp point. No fructification has been detected. The colour of the whole plant is a fine hair-brown, inclining to purple, changing to a greenish grey in drying.

1700



Feb.1.1807. Publish'd by Jas. Sowerby London.

[2054]

CONFERVA fontinalis.

Brownish Spring Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Dark brownish green. Filaments simple, capillary, obtuse, even, divaricated. Joints four times as broad as long.

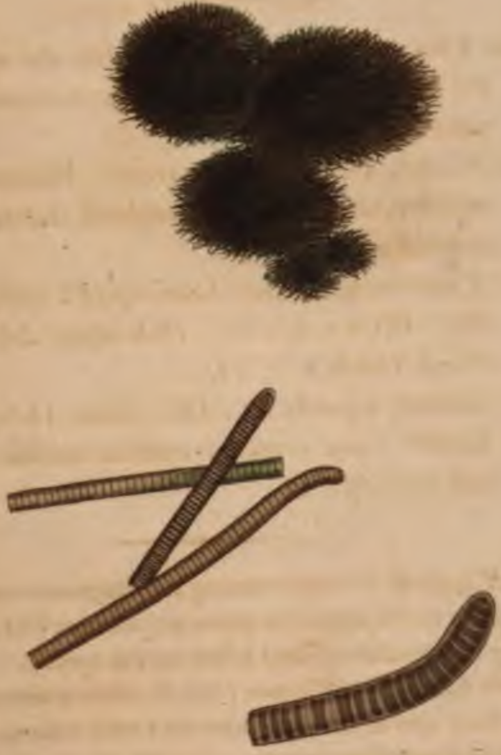
SYN. Conferva fontinalis. *Linn. Sp. Pl.* 1633. *Huds.* 592. *With. v.* 4. 128. *Hull.* 330. *Lightf.* 975*. *Winch Guide, v.* 2. 74.

C. minima, byssi facie. *Dill. Musc.* 14. *t.* 2. *f.* 3.

C. fontalis fusca omnium minima mollis. *Dill. in Raii Syn.* 58.

VERY general in both running and stagnant waters, either attached to rocks, stones, or posts, or, when at its full growth, floating in irregular radiated flakes on the surface. Its colour is a dark dull brownish green; but it often assumes a more brown hue, and at the same time an earthy aspect, from calcareous or ferruginous matter, originally dissolved by carbonic acid gas in the water, which matter this plant, like *Chara* and others, attaches to itself, apparently by imbibing the solvent. It is a great agent in purifying corrupted water, as Dr. Priestley first remarked.

The filaments are several lines in length, simple, spreading in a concentric manner, even, obtuse at each end, composed of regular very short joints, about four times as broad as they are long, so that we can hardly conceive it to be the advanced state of *C. limosa, t.* 2053, because the joints of this tribe are commonly lengthened by age.



[illegible] 1 1809 published by Jas. Sowerby London

[2053]

CONFERVA limosa.

Dark-green Mud Conferva.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

Spec. Char. Dark blueish green. Filaments simple, capillary, obtuse, gelatinous, short, even, compact. Joints indistinct, nearly as long as broad.

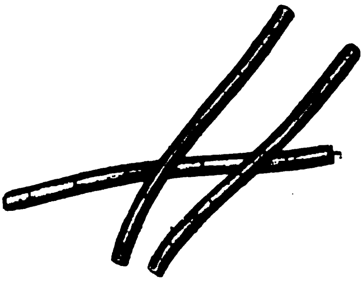
Syn. Conferva limosa. *Dillw. Conf. t.* 20. *Winch Guide*, v. 2. 74.

C. gelatinosa, omnium tenerrima et minima, aquarum limo innascens. *Dill. in Raii Syn.* 477. *Musc.* 15.

Sent by Mr. W. Borrer, who finds it common in running water, growing, as Dillenius remarks, upon fine black mud, with which it altogether forms a soft mucous mass, to be examined successfully only by placing it for a time in a pan of water, before we use the microscope. Mr. Dillwyn says, "though when first immersed, its filaments are so thickly matted that they cannot be disentangled, yet in the space of a night it will shoot out an immense quantity of threads, visible to the naked eye only from their number." These threads lie densely entangled over each other, and are each about half an inch long, of a dark blueish green, blunt at each end, simple, even, gelatinous; when very highly magnified proving to consist of obsolete joints, each nearly as long as broad. Dillenius says, "as its parts are invisible, it would be rash to give a figure of it," so he leaves it unattempted, though his figure is quoted by authors as if it existed.

Mr. Dillwyn, in his description of *C. fontinalis, t.* 64, expresses a suspicion of the present being only a young state of that species; but if our idea of the length of the joints be correct, they should be different. See *t.* 2054.

2053.



[illegible] by Jas. Sowerby London.

116.

CONFERVA tenuissima.

Minute Warm-spring Conferva.

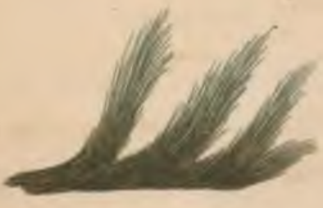
CRYPTOGAMIA Algæ.

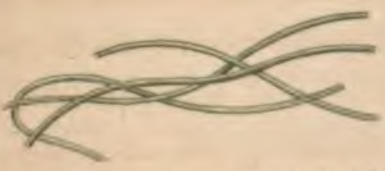
Gen. Char. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

Spec. Char. Dark green, ascending, tufted. Filaments simple, cylindrical, even, without any visible joints.

COMMUNICATED to Mr. Sowerby, by the Rev. Dr. Davies, who observed it in the celebrated warm waters of Bath, Somersetshire, spreading, rather unequally, in broad velvet-like patches, of a dark green colour. The irregularity of its appearance arises from the filaments being collected together into little ascending tufts, apparently rooted in the muddy deposit of the water. Each tuft proves, on examination, to consist of simple, uniform, even filaments; crowded together, quite pellucid, and equally destitute of joints and branches. Their diameter is not more than eight or ten thousandth parts of an inch; this being one of the most minute species that we have examined. We can refer it to none in Mr. Dillwyn's work.

2584





[illegible] published by Js. Sowerby London

117.

CONFERVA cyanea.

Sky-blue Wall Conferva.

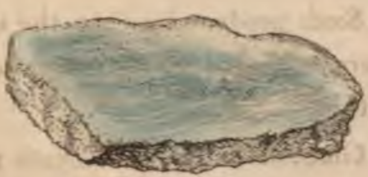
CRYPTOGAMIA Algæ.

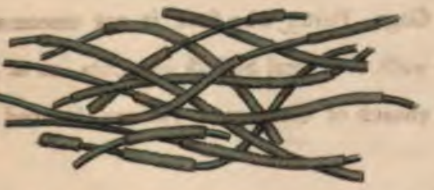
GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

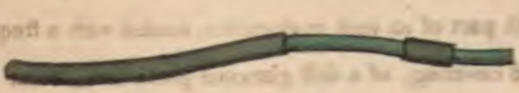
SPEC. CHAR. Glaucous blue. Filaments simple, entangled, cylindrical, even, with a deciduous coat. Joints obsolete, about as broad as long.

FOR the discovery of this new *Conferva*, we are indebted to Sir Thomas Gage, Bart., who finds it not uncommon on the damp inside walls of several Suffolk churches, as at Icklingham, and his own church of Hengrave. He has observed the same in Lancashire.

On the wall it is conspicuous for its light sky-blue colour, like some sort of *Mucor*. Under a high magnifier, and moistened, it is found to consist of minute, even, simple, entangled threads, one-500dth part of an inch in diameter, coated with a frequently interrupted covering, of a dull glaucous green hue, under which the thread itself appears of a lighter glaucous blueish colour, very even in thickness and surface, consisting of scarcely distinguishable joints, about as broad as they are long.







[illegible] Published by [illegible] London

78.

CONFERVA muralis.

Green Wall Conferva.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced in round, solitary, closed tubercles, projecting from the frond, but united with it.

Spec. Char. Green. Filaments simple, very slender, prostrate, closely entangled, somewhat rigid. Joints very short, slightly swelled, with obsolete partitions.

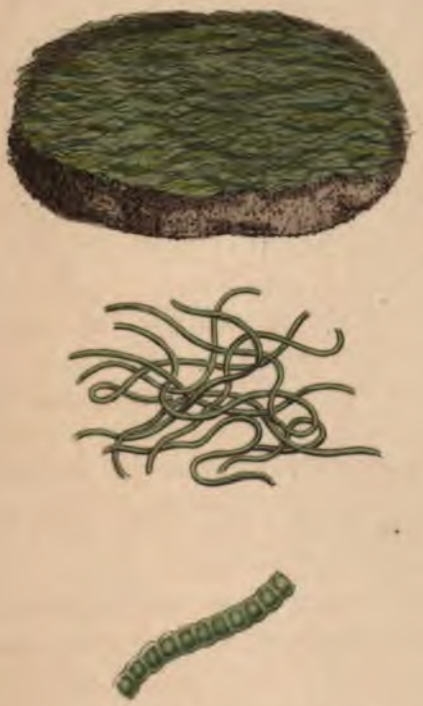
Syn. Conferva muralis. *Dillw. Brit. Conf. t.* 6.

Of all vegetable productions this is perhaps one of the most common upon damp walls, stones, and especially neglected shady gravel walks. The dank areas in which the inhabitants of crowded cities gasp for air, become verdant in the wet [illegible] this Conferva, whose effects on the [illegible] as beneficial as those observed by [illegible] is produced in corrupted water. Yet, [illegible] this plant seems to have escaped [illegible] Mr. Dillwyn.

The [illegible] simple, twisted and entangled together [illegible] with a [illegible] magnifier they are [illegible] than they are broad. [illegible] less conspi- [illegible] Mr. Dillwyn has remarked [illegible] become abruptly [illegible].

[illegible]

1554



June 1. 1806 Published by Jas. Sowerby London.

CONFERVA confervicola.

Pointed Parasitic Conferva.

CRYPTOGAMIA Algæ.

Gen. Char. Seeds produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

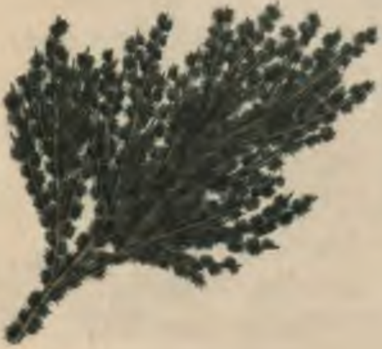
Spec. Char. Glaucous green. Filaments unbranched, shortish, clustered, taper-pointed. Joints four times as broad as long.

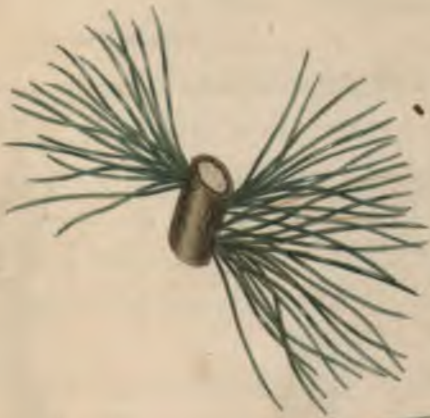
Syn. Conferva confervicola. *Dillw. Syn.* 39. *Conf.* t. 5, *sup.* t. A.

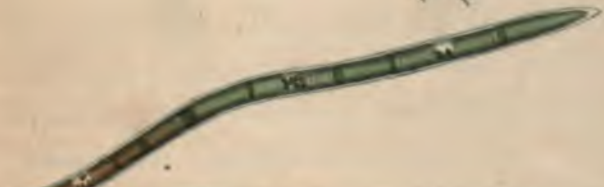
C. marina parasitica, tenuissima et brevissima, glauca. *Dill. Musc.* 552. t. 85. *f.* 21.

COMMON in the sea, not only upon other larger *Confervæ*, but on the slender cylindrical *Fuci*, composing numerous little

2576







Dec. 1 [illegible] published by Jas. Sowerby London

[2171]

CONFERVA scopulorum.

Green Plush Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Dark green. Filaments simple, short, ascending, curved, taper-pointed; glutinous and cohering at the base. Joints very short.

SYN. Conferva scopulorum. *Weber and Mohr's Journey to Sweden*, 195. *t.* 3. *f.* 3. *Dillw. Syn. n.* 12. *t.* A.

GATHERED on planks in the sea, over which it spreads to a great extent, near Bognor, Sussex, by Mr. Borrer, to whom we are obliged for specimens verified by a comparison with some sent to Mr. Turner by Dr. Mohr. It is well figured in a small German volume, which describes a scientific tour through Sweden, performed by this gentleman and his friend Weber.

The patches of this diminutive Conferva resemble coarse dark-green plush or velvet, and consist of innumerable simple filaments, which stand nearly erect, but not perfectly so, each being irregularly bent or curved. The extremities are mostly taper-pointed and pellucid, sometimes rather tumid. Joints twice as broad as long. Mr. Dillwyn remarks that the filaments are agglutinated together towards the base in a singular manner. When dry they cohere in curved clotted tufts.

[illegible] engraved by Jas Sowerby London

121.

CONFERVA vaginata.
Sheathed Conferva.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

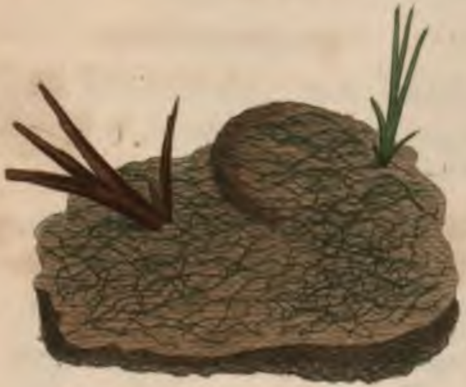
Spec. Char. Glaucous-green, branched, cylindrical, obscurely jointed. Joints as broad as long. Several branches embraced in one sheathing membrane.

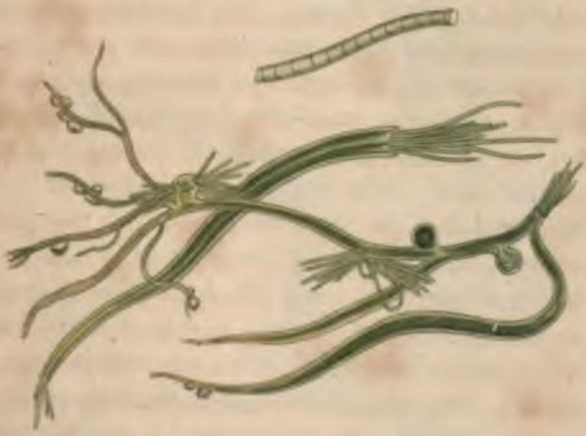
Syn. Conferva vaginata. *Dillw. Conf. t.* 99.
Oscillatoria vaginata. *Vaucher Conf.* 200. *t.* 15. *f.* 13.

THIS it seems is not an uncommon production. We have seen it on the earth of garden pots, and running up their insides, at Norwich, in the damp months of winter, but could never see its structure to our satisfaction. Mr. Sowerby has observed it at Mead Place, Lambeth, and has received it from several friends. The specimens in the annexed plate were found by Mr. Borrer, forming patches several inches wide, on footpaths at Hurst Perepoint, Sussex, in December last.

The fronds grow close to the ground, or garden pot, crossing each other, branching, and forming a sort of irregular network of a more or less glaucous green hue, sometimes nearly black, slippery and moist to the touch, soon withering when gathered, but as soon reviving by the accession of moisture. The filaments when examined separately are very pale and pellucid, with scarcely perceptible but very regular joints, about as broad as long. Several filaments are embraced in one common membranous very delicate tubular sheath, which is peculiar. Here and there are found lateral balls, resembling the fruit of some *Confervæ*, but containing coiled filaments.

1905.





Mar 1 1809 Publish'd by Jas. Sowerby London

122

[2219]

CONFERVA mirabilis.

Cohering Conferva.

CRYPTOGAMIA Algæ.

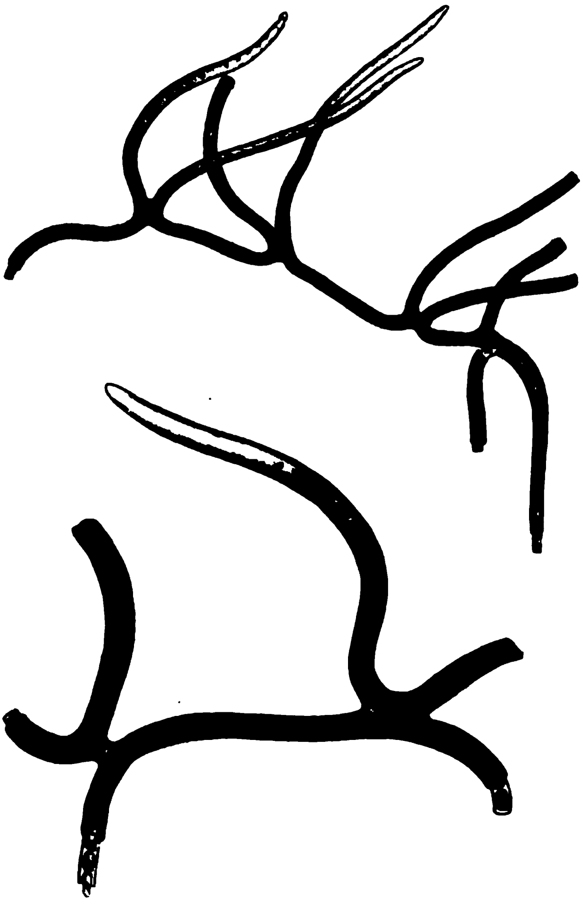
GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Pale olive. Filaments cylindrical, even, cohering and divaricated as if branched. Joints rather broader than long.

SYN. Conferva mirabilis. *Dillw. Conf. t.* 96. *Syn. n.* 14.

COLLECTED in Bantry bay, Ireland, by Miss Hutchins, who sent it to Mr. Turner. Our specimens are parasitical on other submarine plants, and rather olive than blueish green. They consist of cylindrical even filaments, making dense tufts half an inch high, remarkable for cohering here and there, but without any interbranching, or communication of their internal parts. After they have thus united, they immediately divaricate, and then join other filaments, from which they again spread as before. The joints are scarcely so long as broad, and are quite even. Mr. J. D. Sowerby has discovered an external, somewhat horny, coat or sheath, enveloping the whole plant; from which, when cut transversely, a pellucid, pale reddish, more distinctly jointed, internal filament protrudes gradually, and returns again in a few minutes. This circumstance makes us waver respecting Mr. Dillwyn's plant, though verified to us by good authority, as it could hardly have escaped that able observer. Another doubt arises from his being a fresh-water species, and described of a blueish green colour.

2219



[illegible]

123.

[2577]

CONFERVA distorta.

Twisted-branched Conferva.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

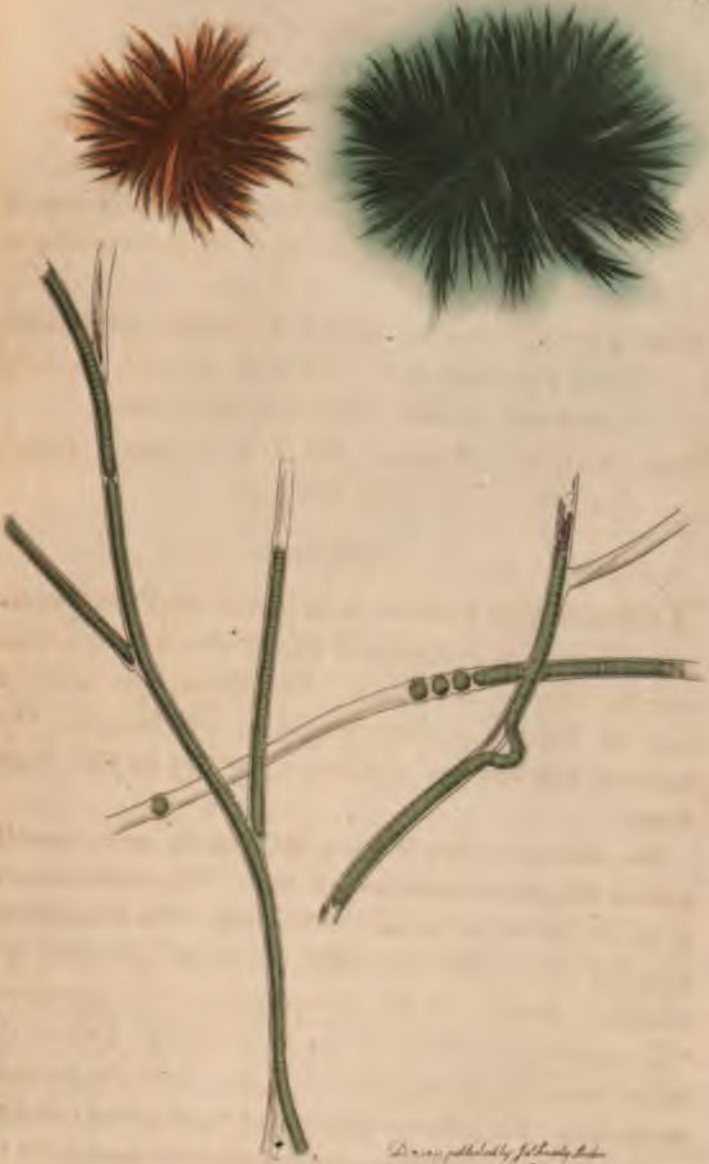
Spec. Char. Glaucous green. Filaments cylindrical, even, cohering as if branched, twisted, slightly spreading. Joints twice as broad as long.

Syn. Conferva distorta. *Fl. Dan. t.* 820. *Dillw. Syn.* 41. *Conf. t.* 22, *and t.* A.

THIS fresh-water Conferva grows in short thick tufts on decaying grass, upon small pieces of which it often floats in autumn over the surface of boggy pools. Mr. Dillwyn, who reckons it very rare, found it on Sketty Burroughs, near Swansea. Our specimens were sent from Anglesea, in 1808, by the Rev. Hugh Davies.

The colour when fresh is a deep but glaucous green, turning paler as the plant advances towards decay. When long exposed to the air, the whole becomes quite tawny. The filaments are from half an inch to an inch long, very slender and even, apparently branched; but Mr. Dillwyn esteems this appearance to be caused by the adhesion of the filaments only. Each is attached merely by its coat, and twisted just above the point of attachment. The joints are full twice as broad as long; at first regular and uniform, but the colouring matter of some seems to swell, or to coalesce, into round balls, leaving the tube empty and pellucid for a considerable space.

2577



D. [illegible] published by Jas. Sowerby London

124.

CONFERVA lucens.

Shining River Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in round, solitary, closed tubercles, projecting from the frond, but united with it.

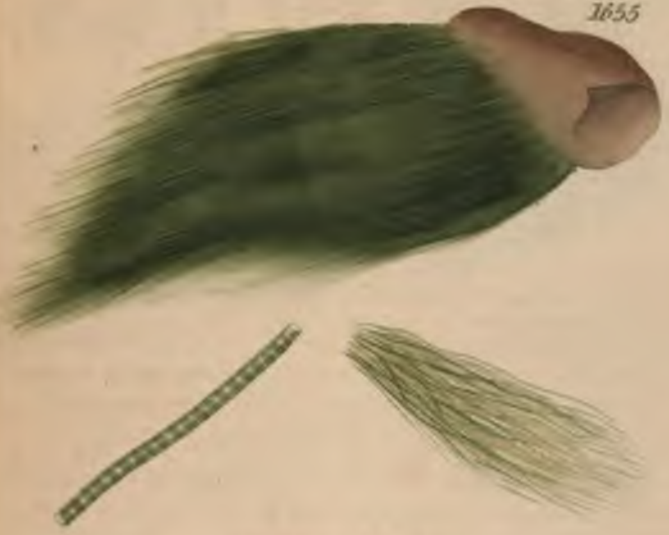
SPEC. CHAR. Bright shining green. Filaments unbranched, slender, slippery. Joints even, rather broader than long.

SYN. Conferva lucens. *Dillw. Conf. t.* 47.

FOUND by Mr. W. Borrer near Lewes, Sussex, in very rapid streams, and sent to Mr. Sowerby in March last. Mr. Dillwyn, its original describer, finds it "not unfrequently in the clear rivulets of Glamorganshire." The filaments are, according to Mr. J. D. Sowerby's microscopical observations, from the 400th to the 700th part of an inch in diameter. They are 2 or 3 inches long, taper-pointed, forming dense tufts which wave in the stream, of a full and shining green, scarcely glaucous in our specimens. The joints are even, about as broad as they are long, or rather broader, not more conspicuous when dry than when fresh. Their extremities are white and pellucid, the green colouring matter being condensed in the middle, as a little band, which extends to the surface.

The fructification of this tribe of fresh-water Confervas has been much illustrated by M. Vaucher. If, as he seems to prove, the colouring matter of their joints be the seed, they differ from the tubercled kinds nearly as *Ulva* differs from *Fucus*, and unquestionably ought to form a new genus.

1655



[illegible] Publish'd by Jas Sowerby London.

CONFERVA rivularis.
Long River Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in round, solitary, closed tubercles, projecting from the frond, but united with it.

SPEC. CHAR. Darkish green. Filaments unbranched, very long, slender, clustered and twisted. Joints even, rather longer than broad.

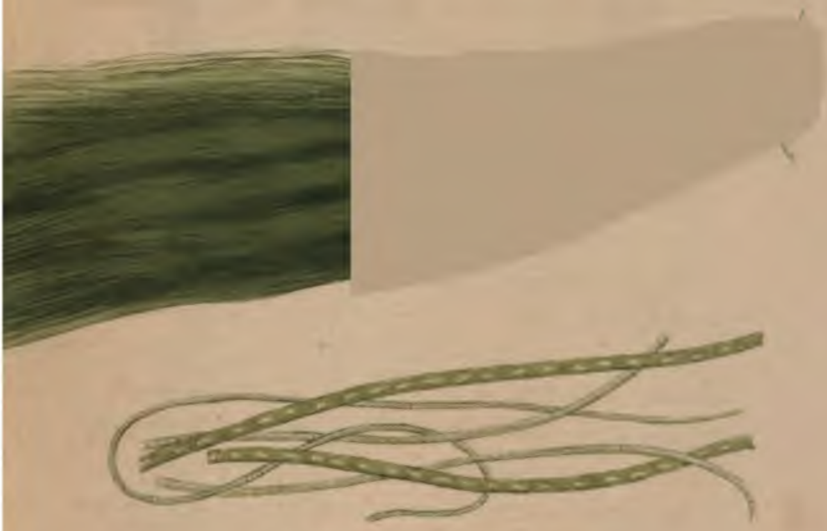
SYN. Conferva rivularis. *Linn. Sp. Pl.* 1633. *Huds.* 591. *With. v.* 4. 127. *Hull.* 330. *Relh.* 483. *Abbot.* 274. *Dillw. Conf. t.* 39.
C. funiformis. *Roth. Catal. v.* 1. 169.
C. fluviatilis sericea vulgaris et fluitans. *Dill. Musc.* 12. *t.* 2. *f.* 1.
C. Plinii. *Raii Syn.* 58.

THERE can be no doubt of this being what Dillenius intended in the place above quoted, though he might gather and confound other things with it; see Mr. Turner's remarks in *Tr. of L. Soc. v.* 7; also Mr. Dillwyn's in his instructive work.

This species has been called Crow Silk, for what reason we know not. It grows in slow streams, and its filaments, extended to the length of 2 or 3 feet, or more, undulating with the current and more or less twisted by its action, are familiar to most observers. The colour is an uniform rather dull or darkish green, brighter in the young plant. The filaments are perfectly simple, of an uniform thickness throughout, though differing greatly from each other, some being about the 900th part of an inch, others not above the 1800th. The joints are not very conspicuous, about half as long again as they are broad, and the colouring matter is pretty equally diffused. When dry the joints become more visible, and the colour of the whole pale and whitish, with the roughish aspect of cotton rather than the gloss of silk.

The plant described under this name by M. Vaucher in his elaborate *Histoire des Conferves d'eau douce*, 129. *t.* 14. *f.* 1, seems to differ essentially from ours, and we are not without suspicion that more than 2 or 3 long floating Confervas may be confounded together by botanists as *C. rivularis.*

1654



Oct 1. 1806. Published by Ja^s. Sowerby London.

126.

CONFERVA bipartita.

Divided-jointed Conferva.

CRYPTOGAMIA Algæ.

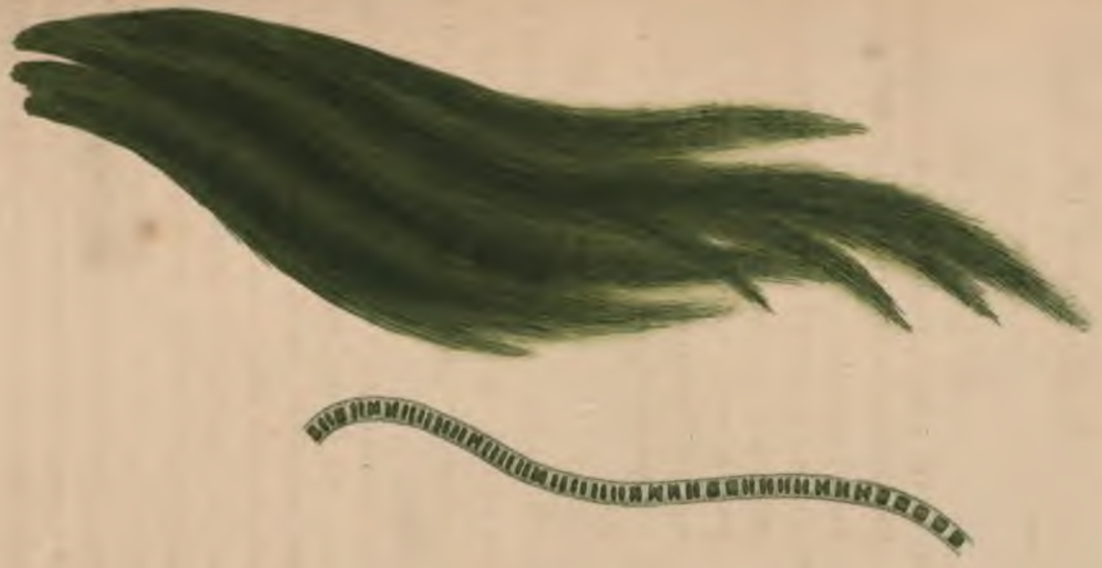
Gen. Char. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

Spec. Char. Yellowish green. Filaments unbranched, slender, very long, in dense masses. Joints as long as broad, or longer, at length transversely separated internally.

Syn. Conferva bipartita. *Dillw. Conf. t.* 105. *Syn. n.* 19.

GATHERED in a salt-water ditch at Newhaven, Sussex, in March 1811, by Mr. W. Borrer, who suspects it may be Roth's *C. semistrangulata*, a question we have no means of determining.

The plant was drawn out by the stream into long twisted masses. Mr. Dillwyn observed his to float on the surface, retaining air-bubbles, like those various species formerly confounded together under the name of *C. bullosa*. The colour is a fine green, growing more yellow, as it appears, by age. Filaments simple, very long, slender and even. Joints in ours about as long as broad; Mr. Dillwyn found them likewise so, though in some specimens nearly thrice as long. This difference could not arise from any action of the stream on the growing plant, as the different kinds grew mixed together, and some joints were of an intermediate proportion. The great peculiarity of the species consists in the separation of the opaque green matter, contained in each joint, into two distinct portions, after the plant has arrived at a certain stage of growth.



CONFERVA [illegible].

[illegible] Conferva.

[illegible]

Gen. Char. [illegible]

Spec. Char. [illegible]

Syn. [illegible]

This [illegible]

[illegible] with the specimens in Mr. [illegible]

127.

[2303]

CONFERVA sordida.

Dirty Conferva.

CRYPTOGAMIA Algæ.

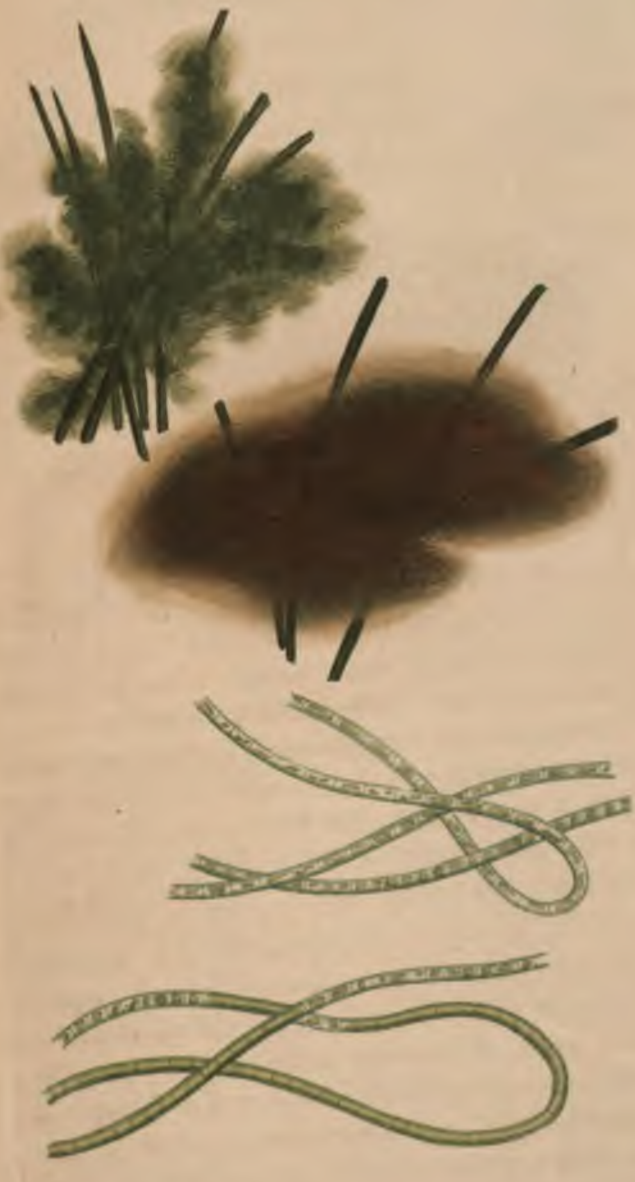
Gen. Char. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

Spec. Char. Pale olive green. Filaments unbranched, very slender, entangled in dense masses. Joints rather longer than broad, pellucid as well as their partitions.

Syn. Conferva sordida. *Roth Catal. fasc.* 1. 177. *t.* 2. *f.* 4. *Dillw. Conf. t.* 60. *Syn. n.* 21.

β. C. fugacissima. *Roth Catal. fasc.* 1. 176. *t.* 2. *f.* 3. *Dillw. Syn. n.* 20. *t.* B.

THIS is excellently described by Roth and Dillwyn as composing cloud-like or slimy semitransparent masses in clear stagnant pools, and adhering in that form to grasses or reeds that grow under water. When dislodged it floats on the surface, and assumes a dirty appearance, from "decayed vegetable matter and mud;" we suspect that, like many other aquatic plants, it causes the water to deposit earth, by absorbing the air which had been united with it. The filaments are very fine, even, simple, of a light green when young, turning of a very pale olive by age. Their joints are as long as broad, or twice as long, for we cannot but think, with Mr. Borrer, that the latter circumstance, which characterizes the *fugacissima,* is variable. The whole, with the partitions, is so extremely pellucid, that we can judge of the length of the joints only by observing the contraction or disturbance of the green matter within, which takes place very soon after gathering. The synonyms of Roth Mr. Dillwyn verified by a comparison with his specimens in Mr. Turner's herbarium.



July 1811 published by Jas. Sowerby London

128.

CONFERVA alternata.

Alternate Conferva.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

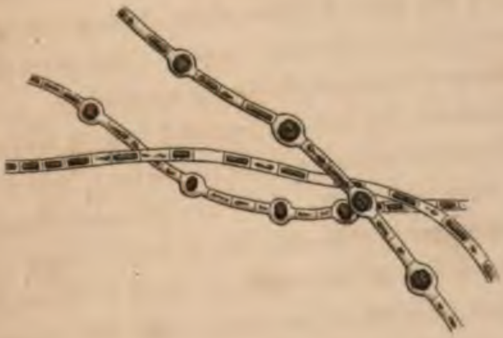
Spec. Char. Variegated with brown and green. Filaments unbranched, slender; joints half as long again as broad, alternately pellucid and opaque, here and there swelling.

Syn. Conferva alternata. *Dillw. Syn. n.* 22. *t.* B.
Prolifera vesicata. *Vaucher. Conf.* 132. *t.* 14. *f.* 4.

NOT uncommon in fresh-water pools and ditches in the spring. Mr. Borrer sent it from Sussex, observing that the brown and the green varieties of Mr. Dillwyn are often seen in different joints of the same filament. This gives the whole mass a changeable or party-coloured appearance.

The filaments are loosely entangled in light floating tufts, and are described as six or eight inches long, which is more than we have met with. They are extremely slender, and their coats perfectly pellucid. Each joint, nearly twice as long as broad, has in the centre a green or brown opaque mass, which in some of the joints either fails originally of coming to perfection, or contracts and disappears sooner than in others, and this difference takes place pretty exactly in an alternate order. Every third or fourth joint, however, in some filaments, is remarkably swelled, into a globular form, seemingly from the extraordinary turgescence of its green or brown contents, almost as in *C. inflata*, *t.* 1670.

2304



[illegible] published by Jas. Sowerby London

129.

CONFERVA nummuloides.

Money-wort Conferva.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

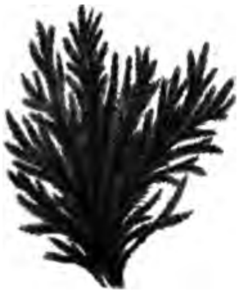
Spec. Char. Simple, slender, brittle, palish brown. Joints rather broader than long, red in the centre, combined in pairs.

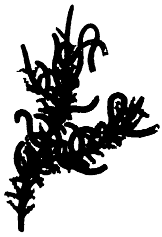
Syn. Conferva nummuloides. *Dillw. Syn.* 45. *n.* 25. *t.* B.

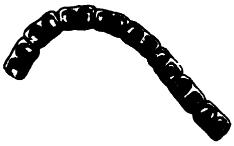
GATHERED by Mr. Borrer, on whom we rely for the name, in March 1811, among *Conferva flocculosa*, adhering to various others of the same genus, in Shoreham harbour, Sussex. Mr. Sowerby has also received the same, amongst numerous minute and imperfect *Confervæ*, from Miss Biddulph. Mr. Dillwyn found his plant in the river Lea.

The filaments are short, tortuous, and cylindrical, of a brittle nature. Their colour a dirty white, except that in the centre of each joint is a round assemblage of seeds, of a yellowish, brownish, or red colour. The latter is the case in our specimens, which seem to be more perfect than Mr. Dillwyn's, showing moreover that the joints are combined in pairs.

2287







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CONFERVA implexa.

Entangled Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

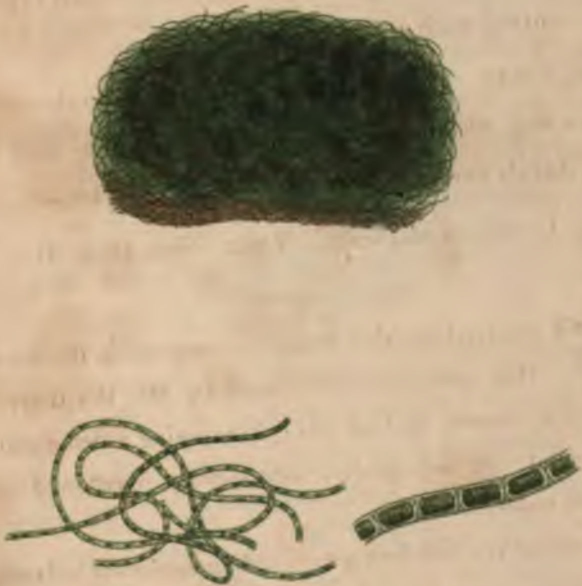
SPEC. CHAR. Dark green. Filaments unbranched, even, entangled and curled, slender and soft. Joints even, nearly twice as long as broad.

SYN. Conferva implexa. *Dillw. Syn.* 46. *t.* B.

FIRST observed by Miss Hutchins, on rocks in the sea near Bantry. Our specimens were found by Mr. W. Borrer at Southwick, Sussex, in June 1811, composing a dense mat on the ground, in wet places, occasionally overflowed with brackish water.

The colour is a full dark green, fading somewhat in drying; the substance always soft and rather silky to the touch. The threads are variously curled and entangled, yet not rigid. Their dimensions are uniform and even. The joints about twice as long as broad, or something less, full of green matter, except at the very extremities and edges, which, as usual, are either originally white and pellucid, or speedily become so after gathering.

2309



Aug. 1 [illegible] Published by Ja.s Sowerby London

CONFERVA tortuosa.

Curling Green Conferva.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

Spec. Char. Green. Filaments simple, capillary, even, rather rigid, curled, twisted and entangled. Joints cylindrical, thrice as long as broad.

Syn. Conferva tortuosa. *Dillw. Conf. t.* 46. *Syn. n.* 29.

Mr. BORRER gathered our specimens in ditches near Selsey, Sussex, and sent them in a fresh state.

The filaments grow in an entangled rather elastic mass, of a deep green, and are as fine as human hair, considerably tenacious, even, remarkably curled and undulated, their joints exactly cylindrical, at least three times as long as broad, the partitions soon becoming pellucid, and the green matter within each joint shrinking into the middle as they dry.

We are not quite sure that lateral branches are not occasionally, though very rarely, sent off by the filaments; but this is foreign to the nature of the tribe to which *C. tortuosa* appears, by all other signs, to belong. We leave it to future observers to correct or to confirm our remark.

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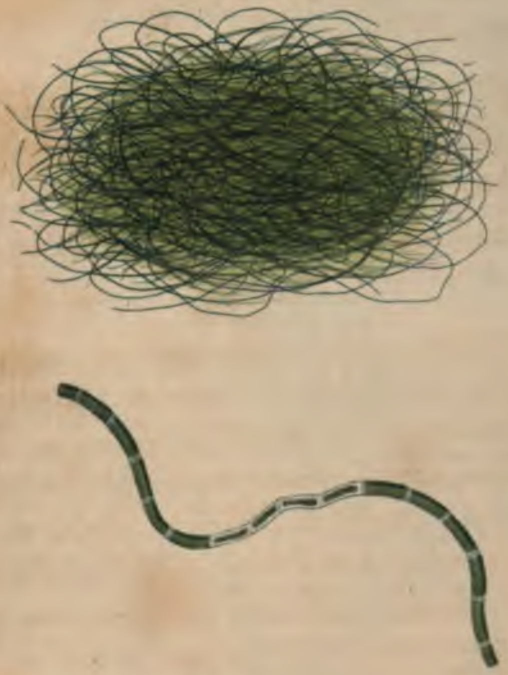

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[2364]

CONFERVA capillaris.

Capillary Cross-jointed Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

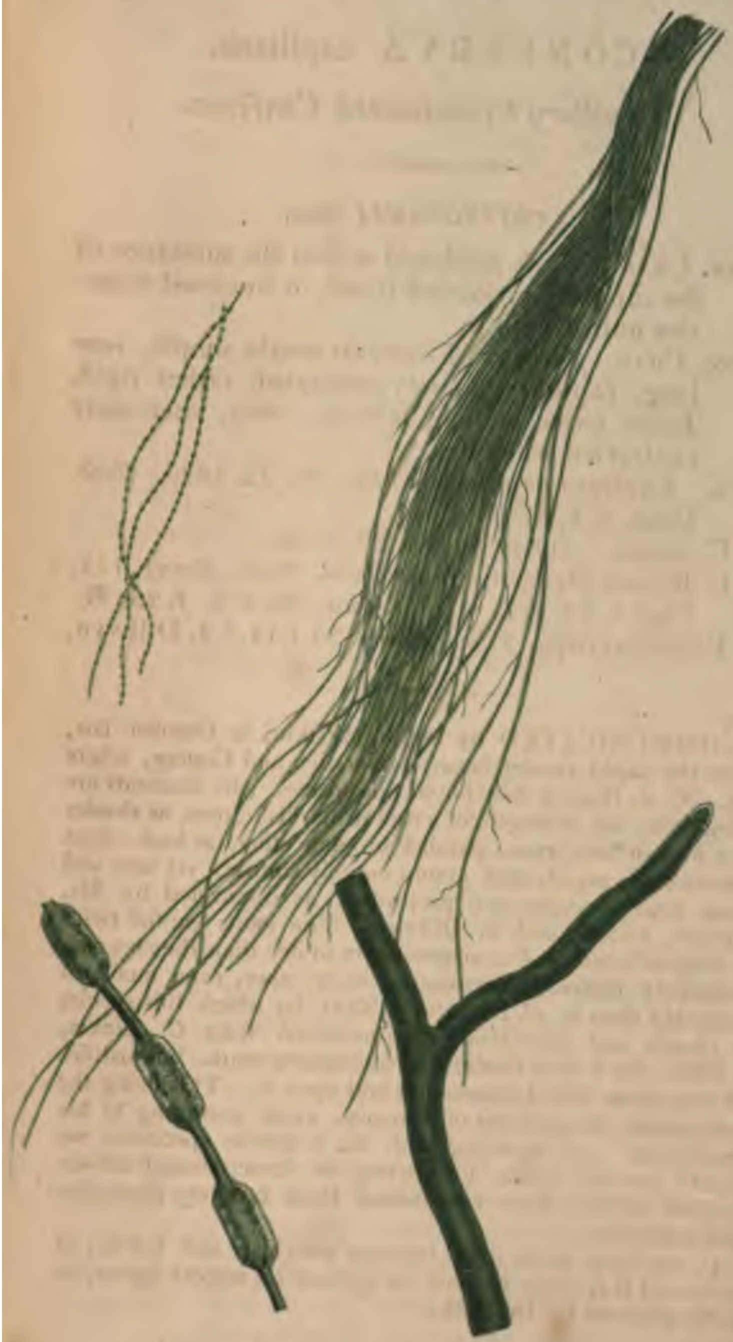
SPEC. CHAR. Green. Filaments nearly simple, very long, capillary, loosely entangled, rather rigid. Joints twice as long as broad, even, alternately contracted when dry.

SYN. Conferva capillaris. *Linn. Sp. Pl.* 1636. *Roth. Catal.* v. 1. 175.
C. crispa. *Dillw. Syn.* n. 30. *t.* B.
C. fluitans filamentis geniculatis. *Pluk. Almag.* 113. *Phyt. t.* 84. *f.* 9. *Dill. Musc.* 26. *t.* 5, *f.* 25, B.
Prolifera crispa. *Vauch. Conf.* 130. *t.* 14. *f.* 2. Dillwyn.

COMMUNICATED by Mr. S. Wilkin, in October last, from the rapid rivulet between Norwich and Costesy, where Mr. W. J. Hooker first found this species. Its filaments are often many feet in length, of a dull or darkish green, as slender as a human hair, even, parallel to each other, at least where the stream is rapid, and almost entirely simple: yet here and there small branches are protruded, as discovered by Mr. Hooker, and figured in Dillwyn. The joints are full twice as long as broad, and no sooner begin to dry than they become alternately flattened, decussating each other, even more remarkably than in *C. crispata*, *t.* 2350, by which this species is clearly and abundantly distinguished from *C. Linum*, *t.* 2363; for it is no doubtful or ambiguous mark, but justifies all the stress that Linnæus has laid upon it. This being the indubitable *C. capillaris* of Linnæus, alone answering to his description, and agreeing with his authentic specimen, we cannot see any reason for altering its name, though all our English writers have confounded these two very dissimilar plants together.

C. capillaris when dried becomes roughish and brittle; if moistened it speedily resumes the cylindrical smooth figure, as justly observed by Dr. Roth.

2364



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133.

[2363]

CONFERVA Linum.

Marsh Thread Conferva.

CRYPTOGAMIA Algæ.

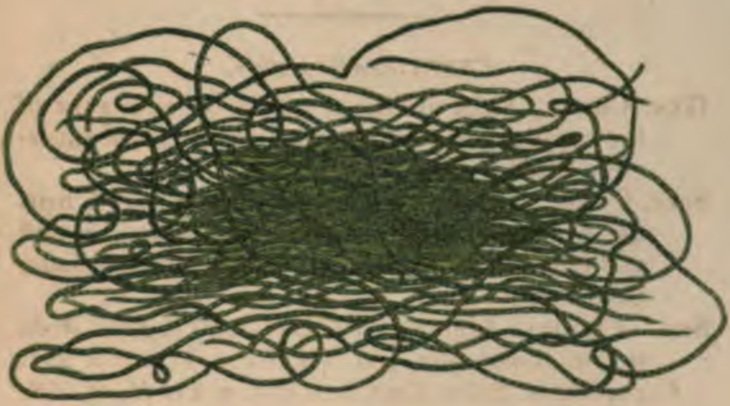
Gen. Char. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

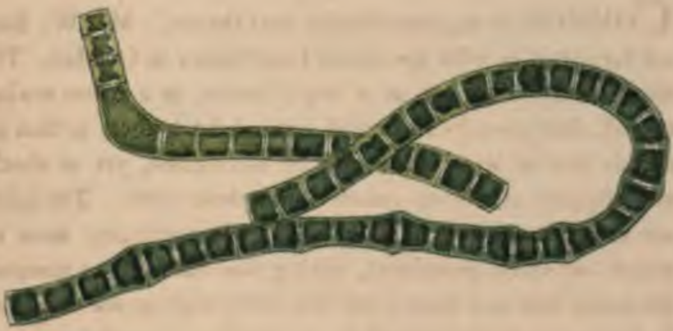
Spec. Char. Green. Filaments simple, round, brittle, somewhat elastic and rigid, uneven, curled and entangled. Joints cylindrical, rather broader than long.

Syn. Conferva Linum. *Fl. Dan. t.* 771. *f.* 2. *Roth. in Ust. Annal. fasc.* 1. 5. *Catal. v.* 1. 174. *v.* 3. 257.
C. capillaris. *Dillw. Conf. t.* 9. *Syn. n.* 31. *Huds.* 598. *With. v.* 4. 135. *Hull.* 333.
C. filamentis longis, geniculatis, simplicibus. *Dill. Musc.* 25. *t.* 5. *f.* 25, A.
C. palustris, seu Filum marinum Anglicum. *Raii Syn.* 60.

C[illegible] in [illegible] near the sea. Mr. W. Borrer [illegible] specimens from Sussex [illegible] October. The filaments are [illegible] coarse sewing thread, [illegible] green, [illegible] together, so that no [illegible] can be ascertained, yet so elastic [illegible] dense mass. The joints are rather broader than long, [illegible] some of which are [illegible] giving the filament an unequal [illegible] but this is not regular nor constant [illegible] equal and parallel manner, [illegible] afterwards [illegible] original appearance. This species does not adhere to paper or glass as it dries. [illegible] are sometimes found upon the threads, which [illegible] when the plant is taken out of the water, [illegible] and which have been taken for capsules [illegible] What Mr. Dillwyn's [illegible] may be, we have not yet ascertained.

2363.





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134.

CONFERVA ærea.

Unequal-jointed Verdigrise Conferva.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

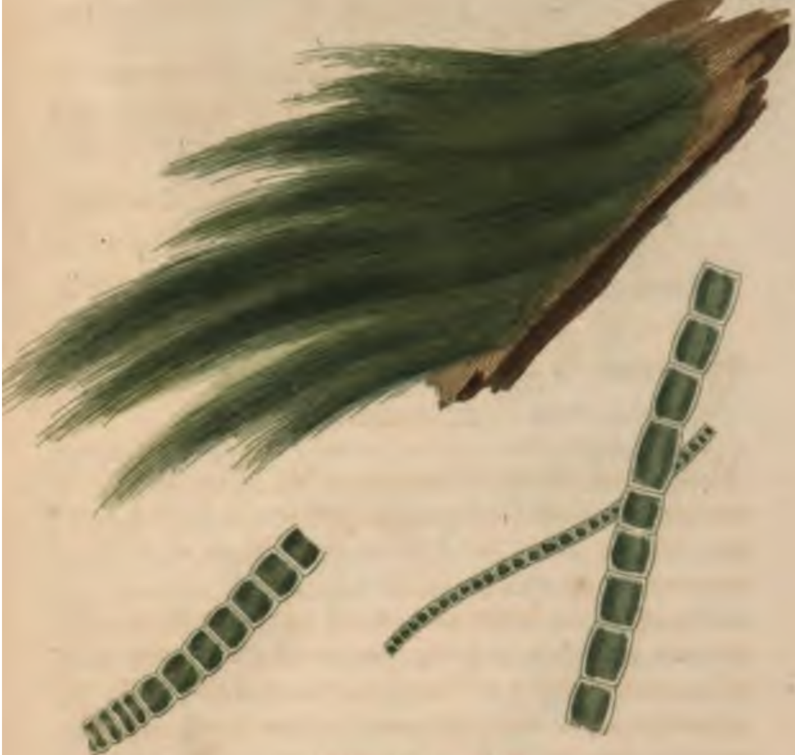
Spec. Char. Green. Filaments unbranched, straight, somewhat rigid. Joints very unequal, scarcely so long as broad; their partitions pellucid and constricted.

Syn. Conferva ærea. *Dillw. Conf. t.* 80.

We are obliged to Mr. Turner and Mr. W. J. Hooker for specimens of this Conferva, collected on the Norfolk coast. Mr. Dillwyn alone has hitherto described it as a British species.

The colour is a bright green with a cast of verdigrise. The filaments grow in large patches on wooden posts or rails in the sea, and are from 3 to 18 inches long, straight, brittle and somewhat rigid, about the size of coarse thread; Mr. Dillwyn has seen them as thick as a crow's quill. They are always unbranched. The joints are seldom or never so long as they are broad, and, as Mr. Dillwyn well observes, "two together often appear, whose united length is precisely the same as that of one of the others, as if they had originally formed only a single joint." The partitions are white and pellucid, and each being a little contracted, the whole frond acquires thence a slightly beaded appearance. Immediately after gathering, the white transparency extends all round each joint.

1929



Sept 1. [illegible] Publish'd by Jas Sowerby London

[2337]

CONFERVA nitida.

Deep-green Combined Conferva.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

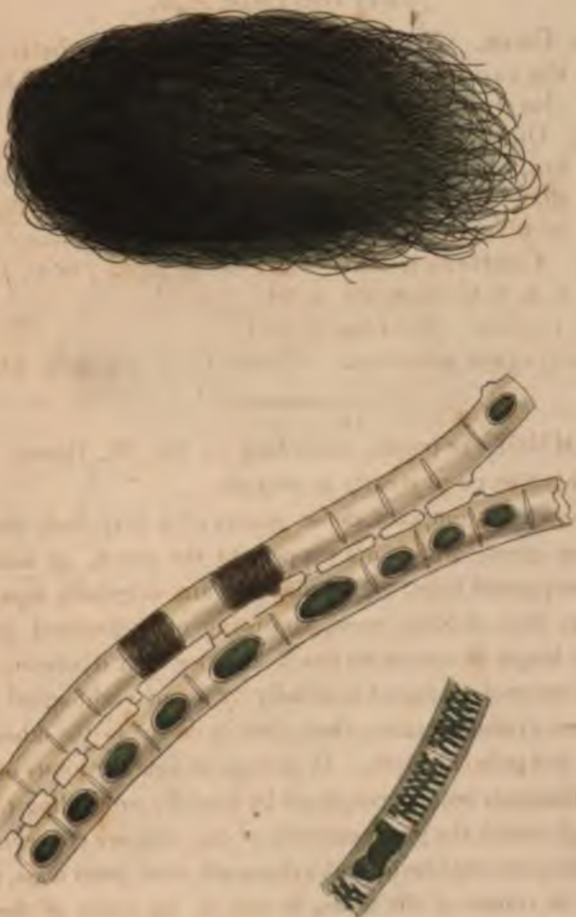
Spec. Char. Deep shining green. Filaments unbranched, slender, slippery. Joints rather longer than broad, becoming laterally conjugated. Grains in several close spiral lines.

Syn. Conferva nitida. *Fl. Dan. t.* 819. *Dillw. Conf. t.* 4. *f.* C. *Syn.* 49. *n.* 34.
C. jugalis. *Fl. Dan. t.* 883.
Conjugata princeps. *Vauch. Conf.* 64. *t.* 4. Dillw.

COMMON in ponds, according to Mr. W. Borrer, from whom we received it early in August.

The whole composes dense masses of a very dark though shining green, which are slippery to the touch, as usual in this conjugated tribe. The filaments are originally separate, simple, very slender, even, consisting of cylindrical joints, whose length is seldom so much as twice their diameter, and which are each occupied internally by about eight spiral lines of green granular matter, that gives its colour to the otherwise white and pellucid plant. In process of time the joints of parallel filaments become conjoined by laterally protruding tubes, through which the green contents of one joint are conveyed to its associated neighbour, and a dense elliptical green mass, supposed to consist of the seeds, is seen in the centre of the receiving joint, the parallel one remaining empty and transparent; which latter circumstance is, as Mr. Borrer justly remarks, not sufficiently attended to in our *t.* 1656, where another of these curious species is delineated. Sometimes it seems this transfusion fails, and the joints which do not meet with any associate become internally brown, and probably decayed.

2337.



[illegible] published by Jas. Sowerby London

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136.

CONFERVA inflata.

Inflated Combined Conferva.

CRYPTOGAMIA Algæ.

Gen. Char. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

Spec. Char. Green. Filaments unbranched. Joints twice as long as broad, becoming swollen, and laterally conjugated. Grains in simple spiral lines.

Syn. Conjugata inflata. *Vaucher Conf.* 68. *t.* 5. *f.* 3.

To correct our error at v. 24. p. 1670, pointed out by Mr. W. Borrer, we now publish what seems really to be the *Conjugata inflata* of Vaucher, found by our friend in boggy pools on Henfield Common, Sussex, last August. The species in *t.* 1670 excited some doubt, having never been found laterally conjugated, even in an advanced state, and we are now convinced of its belonging to a different tribe.

The present floats in dense light-green masses, and its filaments are very slender, simple, composed of joints at first cylindrical, and about twice as long as broad, or rather more, in each of which is a spiral green line. Afterwards the joints become tumid or elliptical, and unite by lateral tubes with those of neighbouring filaments, while the green matter within forms a ball, or rather constitutes an oval seed, according to Vaucher, much as in *C. nitida*, *t.* 2337.

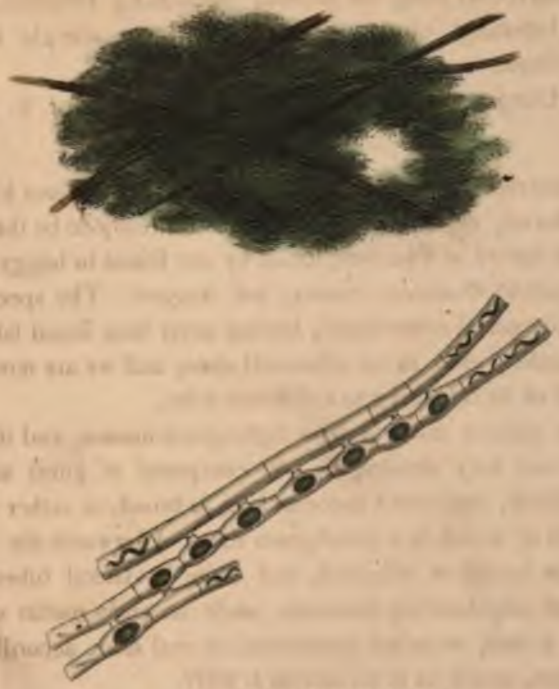
To *tab.* 1670 may now be applied the name of

CONFERVA tumidula.

Tumid-jointed Conferva.

The synonym, of course, must be erased.

2376.



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